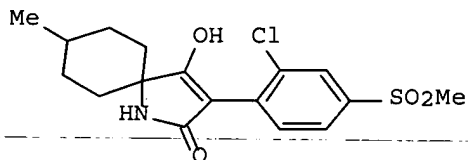
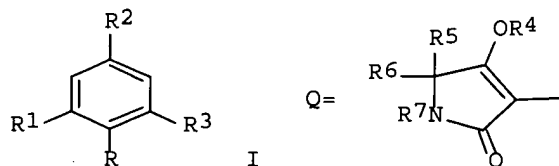


*electet ymer*

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS  
AN 1996:577745 CAPLUS  
DN 125:221568  
TI Preparation of 3-phenyl-2,4-dioxopyrrolidine tautomers and analogs as herbicides and pesticides  
IN Fischer, Reiner; Bretschneider, Thomas; Hagemann, Hermann; Lieb, Folker; Lui, Norbert; Ruther, Michael; Widdig, Arno; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; et al.  
PA Bayer A.-G., Germany  
SO Ger. Offen., 94 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19543864	A1	19960814	DE 1995-19543864	19951124
	WO 9625395	A1	19960822	WO 1996-EP382	19960131
	W:	AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, UA, US			
	RW:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9647158	A1	19960904	AU 1996-47158	19960131
	BR 9606956	A	19971028	BR 1996-6956	19960131
	EP 809629	A1	19971203	EP 1996-902951	19960131
	R:	BE, CH, DE, ES, FR, GB, IT, LI, NL			
	CN 1173866	A	19980218	CN 1996-191907	19960131
	JP 11500114	T2	19990106	JP 1996-524608	19960131
	ZA 9601107	A	19960828	ZA 1996-1107	19960212
	US 6358887	B1	20020319	US 1997-875872	19970805
	US 2003045432	A1	20030306	US 2001-14713	20011211
PRAI	DE 1995-19504621	A1	19950213		
	DE 1995-19543864	A	19951124		
	WO 1996-EP382	W	19960131		
	US 1997-875872	A3	19970805		
OS	MARPAT 125:221568				
GI					



AB Title compds. [I; R = oxopyrrolinyl group Q; R<sup>1</sup> = halo, alkyl, alkoxy, Ph, etc.; R<sup>2</sup>, R<sup>3</sup> = H, halo, alkyl, alkoxy, etc.; R<sup>4</sup> = H, alkanoyl, alkoxy carbonyl, etc.; R<sup>5</sup> = H, alkyl, (hetero)aryl, etc.; R<sup>6</sup> = H, (alkoxy)alkyl; R<sup>5</sup>R<sup>6</sup> = atoms to form a ring; R<sup>7</sup> = H, alkyl, (hetero)aryl, etc.; R<sup>6</sup>R<sup>7</sup> = atoms to form a ring] were prepd. Thus, 2,4-Cl(MeO<sub>2</sub>S)C<sub>6</sub>H<sub>3</sub>Me was converted in 3 steps to 2,4-Cl(MeO<sub>2</sub>S)C<sub>6</sub>H<sub>3</sub>CH<sub>2</sub>CO<sub>2</sub>H

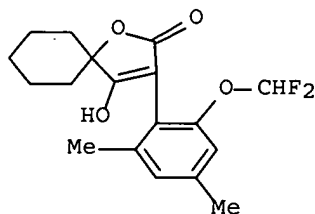
which was amidated by Me 1-amino-4-methylcyclohexanecarboxylate and the product cyclized to give title compd. II. The latter gave complete control of Nephotettix cinciteps on rice seedlings at 0.1%.

IT 181299-98-9P 181300-00-5P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 3-phenyl-2,4-dioxopyrrolidine tautomers and analogs as herbicides and pesticides)

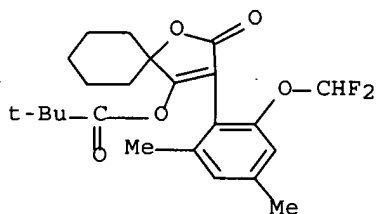
RN 181299-98-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-[2-(difluoromethoxy)-4,6-dimethylphenyl]-4-hydroxy- (9CI) (CA INDEX NAME)

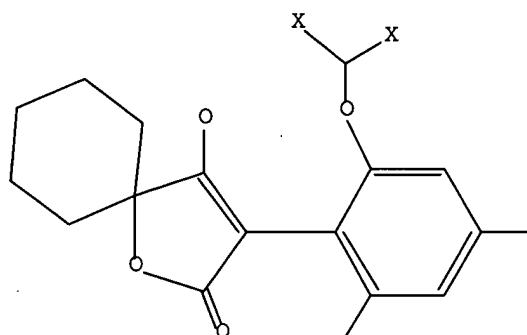


RN 181300-00-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-[2-(difluoromethoxy)-4,6-dimethylphenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



=> d l1; d his; log y  
 L1 HAS NO ANSWERS  
 L1 STR



Structure attributes must be viewed using STN Express query preparation.

(FILE 'HOME' ENTERED AT 16:45:19 ON 07 MAY 2003)

FILE 'REGISTRY' ENTERED AT 16:45:25 ON 07 MAY 2003

L1 STRUCTURE UPLOADED  
 L2 0 S L1  
 L3 2 S L1 FUL

FILE 'CAPLUS' ENTERED AT 16:45:56 ON 07 MAY 2003

L4 1 S L3

FILE 'BEILSTEIN' ENTERED AT 16:46:20 ON 07 MAY 2003

L5 0 S L1  
 L6 0 S L1 FUL

FILE 'MARPAT' ENTERED AT 16:46:37 ON 07 MAY 2003

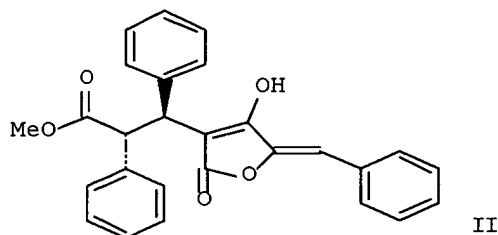
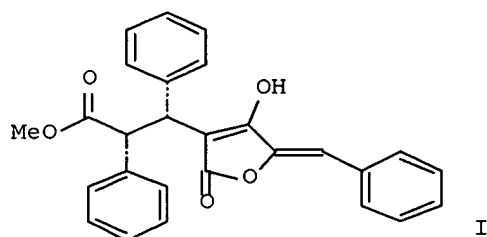
L7 0 S L1  
 L8 1 S L1 FUL  
 L9 0 S L8/COM

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	104.55	257.92
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.65

STN INTERNATIONAL LOGOFF AT 16:47:07 ON 07 MAY 2003

not good art

L9 ANSWER 5 OF 186 CAPLUS COPYRIGHT 2003 ACS  
AN 2002:967192 CAPLUS  
DN 138:166378  
TI Chemical and biological investigation of the fungus *Pulveroboletus ravenelii*  
AU Duncan, Christine J. G.; Cuendet, Muriel; Fronczek, Frank R.; Pezzuto, John M.; Mehta, Rajendra G.; Hamann, Mark T.; Ross, Samir A.  
CS Sch. Pharm., Univ. Mississippi, University, MS, 38677, USA  
SO Journal of Natural Products (2003), 66(1), 103-107  
CODEN: JNPRDF; ISSN: 0163-3864  
PB American Chemical Society  
DT Journal  
LA English  
GI



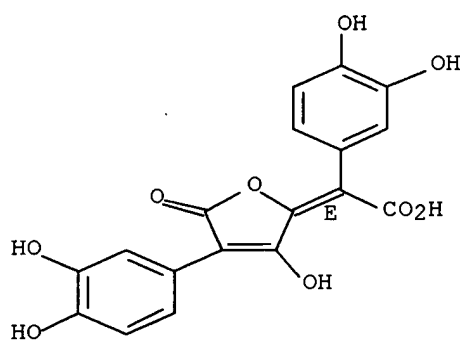
AB Two new compds., pulveraven A (I) and pulveraven B (II), as well as vulpinic acid and its previously unreported polymorph were isolated from the fruiting body of *P. ravenelii*. The structures were detd. using a combination of NMR, MS, IR, optical rotation, mol. modeling, and X-ray anal. The isolates were evaluated for antimicrobial activity as well as their potential to inhibit cyclooxygenase activity and carcinogen-induced preneoplastic lesion formation with mouse mammary organ culture.

IT **20988-30-1P**  
RL: BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation) (chem. and biol. investigation of the fungus *Pulveroboletus ravenelii*)

RN 20988-30-1 CAPLUS  
CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

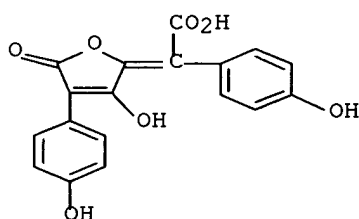
Double bond geometry as shown.





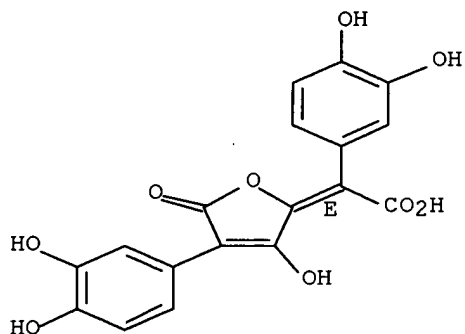
RE.CNT 24      THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 2002:498447 CAPLUS  
 DN 137:259485  
 TI Simple method for reversed-phase high-performance liquid chromatographic analysis of fungal pigments in fruit-bodies of Boletales (Fungi)  
 AU Davoli, Paolo; Weber, Roland W. S.  
 CS Dipartimento di Chimica, Universita di Modena e Reggio Emilia, Modena, I-41100, Italy  
 SO Journal of Chromatography, A (2002), 964(1-2), 129-135  
 CODEN: JCRAEY; ISSN: 0021-9673  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 AB A reversed-phase HPLC method has been developed for the anal. of hydroxylated pulvinic acid derivs. which are responsible for the pigmentation of fruit-bodies belonging to the order Boletales (Fungi). Variegatic, xerocomic and atromentic acid as well as variegatorubin were detected and sepd. in methanolic exts. of Boletus permagnificus and Xerocomus parasiticus, and the pigment profile of these species was compared. The identity of the pigments was confirmed by means of LC-atm. pressure chem. ionization (APCI) mass spectrometry.  
 IT **521-56-2**, Atromentic acid **20988-30-1**, Variegatic acid **25287-88-1**, Xerocomic acid **27286-59-5**, Variegatorubin  
 RL: ANT (Analyte); PEP (Physical, engineering or chemical process); PYP (Physical process); ANST (Analytical study); PROC (Process)  
 (reversed-phase high-performance liq. chromatog. anal. of fungal pigments in fruit-bodies of Boletales (Fungi))  
 RN 521-56-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



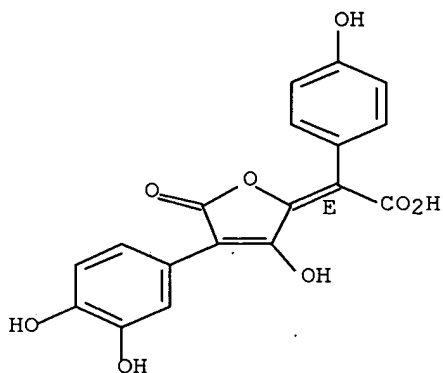
RN 20988-30-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



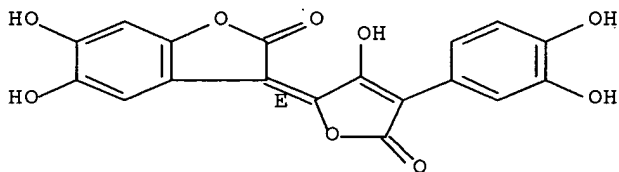
RN 25287-88-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 27286-59-5 CAPLUS  
 CN 2(3H)-Benzofuranone, 3-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-5,6-dihydroxy-, (3E)- (9CI) (CA INDEX NAME)

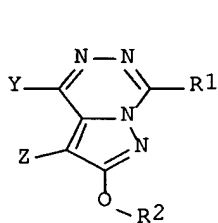
Double bond geometry as shown.



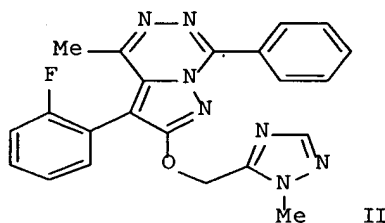
RE.CNT-25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:762999 CAPLUS  
 DN 135:318521  
 TI Pyrazolo-triazine derivatives as ligands for GABA receptors, useful as anxiolytics  
 IN Carling, William Robert; Mitchinson, Andrew; Russell, Michael Geoffrey Neil; Street, Leslie Joseph  
 PA Merck Sharp + Dohme Limited, UK  
 SO PCT Int. Appl., 67 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001077111	A1	20011018	WO 2001-GB1548	20010404
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1282623	A1	20030212	EP 2001-917318	20010404
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2003060467	A1	20030327	US 2002-240971	20021007
PRAI	GB 2000-8696	A	20000407		
	WO 2001-GB1548	W	20010404		
OS	MARPAT 135:318521				
GI					



I



II

AB A class of substituted pyrazolo[1,5-d][1,2,4]triazine derivs. with GABAA receptor activity is disclosed, in particular, compds. I [Y = C1-6 alkyl;

Z = halo, C1-6 alkyl, C3-7 cycloalkyl, C4-7 cycloalkenyl, C6-8 bicycloalkyl, aryl, C3-7 heterocycloalkyl, heteroaryl, or di(C1-6)alkylamino, any of which may be substituted; R1 = C3-7 cycloalkyl,

Ph, furyl, thienyl, pyridinyl, or pyrazinyl, any of which may be substituted; R2 = C3-7 cycloalkyl-(C1-6)-alkyl, aryl-(C1-6)-alkyl, or heteroaryl-(C1-6)-alkyl, any of which may be substituted] and their

salts

and prodrugs. Notably, the compds. possess an optionally substituted cycloalkyl, Ph or heteroaryl substituent at the 7-position, an alkyl

group

at the 4-position, and a substituted alkoxy moiety at the 2-position. I are selective ligands for GABAA receptors, in particular having high affinity for the .alpha.2 and/or .alpha.3 subunit thereof, and are accordingly of benefit in the treatment and/or prevention of disorders

of

the central nervous system, including anxiety and convulsions. Twenty examples are prepd. and specifically claimed. For instance, cyclocondensation of toluene-4-sulfonic acid 5-acetyl-4-(2-

fluorophenyl)-

1H-pyrazol-3-yl ester (prepn. given) with PhCONHNH2 in refluxing xylene

to

form a pyrazolotriazine nucleus, followed by etherification of the tosylate with (2-methyl-2H-[1,2,4]triazol-3-yl)methanol, gave title

compd.

II. In an assay for displacement of [3H]-flumazenil from the .alpha.2 and/or .alpha.3 subunit of the human GABAA receptor, expressed in Ltk cells, all example compds. I had Ki values of 100 nM or less.

IT **367281-04-7P**, 3-(2-Fluorophenyl)-4-hydroxy-5-methyl-5H-furan-2-one

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

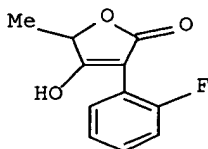
RACT

(Reactant or reagent)

(intermediate; prepn. of pyrazolotriazine derivs. as GABAA receptor ligands and anxiolytics)

RN 367281-04-7 CAPLUS

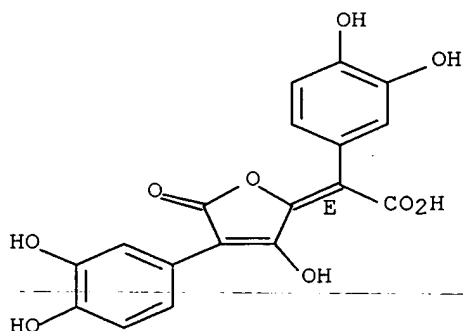
CN 2(5H)-Furanone, 3-(2-fluorophenyl)-4-hydroxy-5-methyl- (9CI) (CA INDEX NAME)



RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

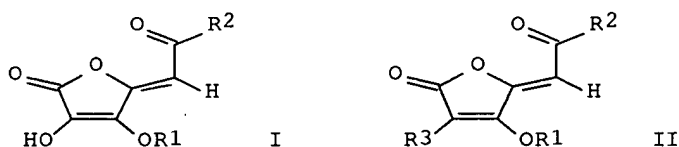
L9 ANSWER 13 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:722166 CAPLUS  
 DN 136:2843  
 TI Mercaptan-Capturing Properties of Mushrooms  
 AU Negishi, Osamu; Negishi, Yukiko; Aoyagi, Yasuo; Sugahara, Tatsuyuki;  
 Ozawa, Tetsuo  
 CS Institute of Applied Biochemistry, University of Tsukuba, Tsukuba  
 Ibaraki,  
 305-8572, Japan  
 SO Journal of Agricultural and Food Chemistry (2001), 49(11), 5509-5514  
 CODEN: JAFCAU; ISSN: 0021-8561  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB Mercaptan-capturing properties of 33 kinds of mushrooms were measured.  
 The mushrooms having a high capturing ability toward Me mercaptan (MeSH)  
 were *Agaricus bisporus*, *A. campestris*, *Boletus fraternus*, *B.*  
*subvelutipes*,  
*Gyrodon lividus*, *Leccinum scabrum*, *Suillus grevillei*, *Morchella*  
*esculenta*,  
*Russula nigricans*, *Hypholoma sublateritium*, and *Lyophyllum sykosporum*.  
 These are liable to change their color when injured. The mixt. of their  
 acetone powders, which contain polyphenol oxidases, and phenolic compds.  
 such as tyrosine, .gamma.-L-glutaminy-4-hydroxybenzene (GHB), DOPA,  
 variegatic acid, grevillin B and C, and pigments, and fluorescent  
 compds.  
 from *H. sublateritium* also showed high MeSH-capturing properties. .  
 2,5-Bis(methylthio)-DOPA was isolated from the reaction mixt. of  
 tyrosine  
 and MeSH with tyrosinase, and the existence of 2- and 5-methylthio-DOPAs  
 was also suggested. Furthermore, acetone powders from fruits and  
 vegetables oxidized the above diphenolic compds. to bind MeSH.  
 IT **20988-30-1**, Variegatic acid  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (mercaptan-capturing properties of mushrooms)  
 RN 20988-30-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-  
 2(5H)-furanlydene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 23 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:168555 CAPLUS  
 DN 134:353216  
 TI Efficient synthesis of .gamma.-alkylidenetetrone esters by sequential Lewis acid catalyzed [3+2] cyclizations and palladium-catalyzed cross-coupling reactions  
 AU Langer, Peter; Eckardt, Tobias; Schneider, Toni; Goebel, Cornelia; Herbst-Irmer, Regine  
 CS Institut fuer Organische Chemie, Georg-August-Universitaet Goettingen, Goettingen, 37077, Germany  
 SO Journal of Organic Chemistry (2001), 66(7), 2222-2226  
 CODEN: JOCEAH; ISSN: 0022-3263  
 PB American Chemical Society  
 DT Journal  
 LA English  
 OS CASREACT 134:353216  
 GI



AB .gamma.-Alkylidenetetrone acids and esters I (R1 = Me, R2 = MeO; R1 = allyl, benzyl, R2 = EtO; R1 = R2 = Me) were prepd. via Me3SiOTf-catalyzed regio- and stereoselective cyclization of 4-alkoxy-1,3-bis(trimethylsilyloxy)-1,3-butadienes R1OCH:C(O-TMS)CH:CR2(O-TMS) with oxalyl chloride. The .alpha.-hydroxy groups of these butenolides were functionalized by Pd-catalyzed cross-coupling reactions with R3SnR3 (R = Bu, Me; R3 = Ph, 2-furyl, vinyl, etc.) via enol triflates to give cross-coupled products II. The crystal/mol. structures of I (R1 = Me, R2 = MeO) was detd. by x-ray crystal structure anal.

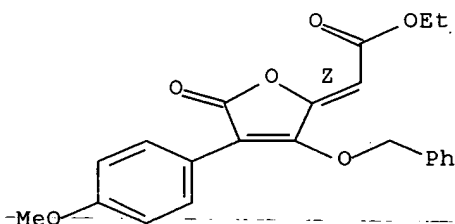
IT 339220-59-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of .gamma.-alkylidenetetrone esters via Pd-catalyzed cross-coupling of alkylidene(trifluoromethylsulfonyloxy) furanones with alkylstannanes)

RN 339220-59-6 CAPLUS

CN Acetic acid, [4-(4-methoxyphenyl)-5-oxo-3-(phenylmethoxy)-2(5H)-furan-2-ylidene]-, ethyl ester, (2Z)- (9CI) (CA INDEX NAME)

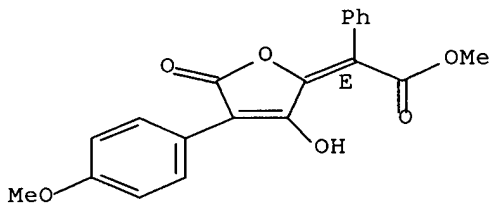
Double bond geometry as shown.



RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 25 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:31989 CAPLUS  
 DN 134:263215  
 TI Phenols in reproductive and somatic structures of lichens. A case of optimal defence?  
 AU Hyvarinen, Marko; Koopmann, Ricarda; Hormi, Osmo; Tuomi, Juha  
 CS Dept of Biology, Univ. of Oulu, Oulu, FIN-90014, Finland  
 SO Oikos (2000), 91(2), 371-375  
 CODEN: OIKSAA; ISSN: 0030-1299  
 PB Munksgaard International Publishers Ltd.  
 DT Journal  
 LA English  
 AB Optimal defense theory (ODT) attempts to explain variation in plant secondary compds. between different species, different growth conditions and different parts of individual plants. The theory is widely applied to vascular plants and more recently also to seaweeds. Surprisingly, ODT has gained little attention as potential explanation on the distribution of lichen secondary metabolites. In the present study, the authors analyzed intrathalline variation in total phenol content and phenol spectra between reproductive and somatic structures of 3 foliose lichens, *Xanthoria parietina*, *Vulpicida pinastri*, and *Hypogymnia physodes*. The results showed that the concn. of phenolic compds. is higher in sorediate than in non-sorediate lobe ends of *V. pinastri* and *H. physodes* as well as in apothecia of *X. parietina* compared to other parts of the thallus. These results were in accordance with ODT predicting higher allocation of phenols in structures that are most important for the fitness of an individual genet or ramet. This pattern was parallel in all species regardless whether the compds. originate from either acetate-mevalonate or shikimic acid pathways. Moreover, both sexual (*X. parietina* apothecia) and asexual (soralia of *V. pinastri* and *H. physodes*) reproductive structures were higher in phenols compared to somatic tissue.  
 IT **481-64-1**, Pinastric acid  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
 (phenols in reproductive and somatic structures of lichens for optimal defense)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanlydene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

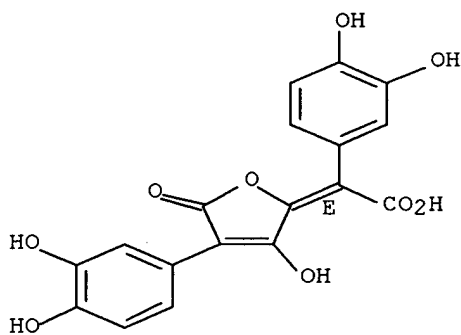


RE.CNT 37      THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT



L9 ANSWER 28 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 2000:820942 CAPLUS  
 DN 134:221720  
 TI Enzymatic deodorization with variegatic acid from *Boletus subvelutipes* and its mechanism  
 AU Negishi, Osamu; Negishi, Yukiko; Ozawa, Tetsuo  
 CS Institute of Applied Biochemistry, University of Tsukuba, Tsukuba, 305-8572, Japan  
 SO Food Science and Technology Research (2000), 6(3), 186-191  
 CODEN: FSTRFS; ISSN: 1344-6606  
 PB Japanese Society for Food Science and Technology  
 DT Journal  
 LA English  
 AB Variegatic acid (3,3',4,4'-tetrahydroxypulvinic acid, VA) which causes a blueing phenomenon in mushrooms was isolated from *Boletus subvelutipes*. *B. subvelutipes* contains 916 mg VA/100 g dry wt. of the fruit body. A mixt. of VA and acetone powder from *B. subvelutipes* caused removal of Me mercaptan (MeSH) after blueing. Optimum pH for the blueing activity by polyphenol oxidase from *B. subvelutipes* was 5.0 and a high deodorizing activity was obsd. around the optimum pH. The rate of MeSH removal with VA in 0.4 M potassium phosphate buffer (pH 8.0) was about 36 times as high as that with (-)-epigallocatechin gallate, which has been reported to have the highest deodorizing activity among tea catechins. The authors isolated several kinds of conjugates of VA mols. with 1-3 MeSH mols. These results suggest that VA has a high deodorizing activity because it can easily be oxidized and can bind to MeSHs at 6 positions in the 2 dihydroxybenzene rings of VA.  
 IT **20988-30-1**, Variegatic acid  
 RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)  
 (enzymic deodorization with variegatic acid from *Boletus subvelutipes*)  
 RN 20988-30-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

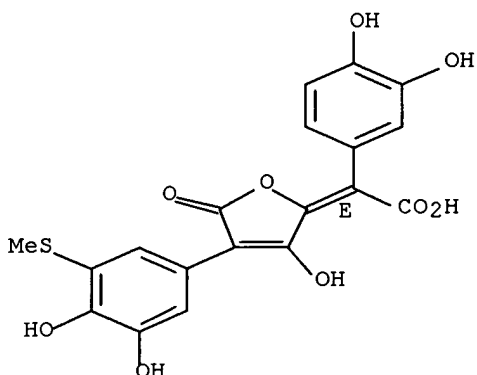
Double bond geometry as shown.



IT **329308-06-7 329308-07-8 329308-08-9**  
**329308-09-0 329308-10-3 329308-11-4**  
 RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)  
 (enzymic deodorization with variegatic acid from *Boletus subvelutipes*)  
 RN 329308-06-7 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-[3,4-dihydroxy-5-(methylthio)phenyl]-3-

hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

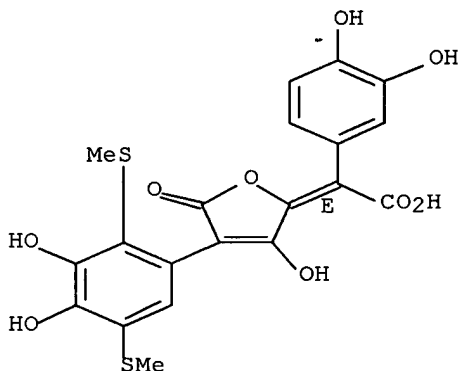


RN 329308-07-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[3,4-dihydroxy-2,5-bis(methylthio)phenyl]-3-

hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

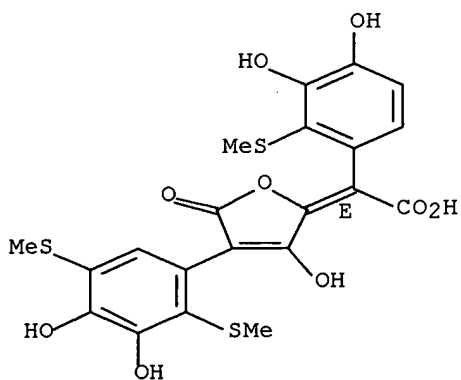


RN 329308-08-9 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[3,4-dihydroxy-2,5-

bis(methylthio)phenyl]-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy-2-(methylthio)-, (.alpha.E)- (9CI) (CA INDEX NAME)

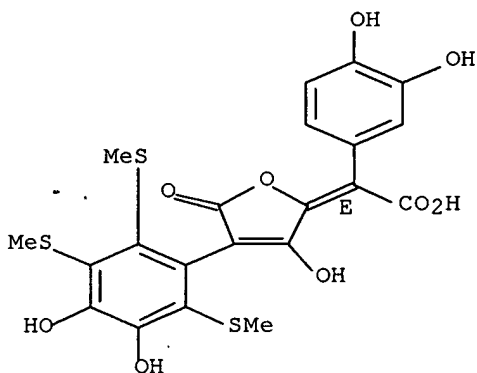
Double bond geometry as shown.



RN 329308-09-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[3,4-dihydroxy-2,5,6-tris(methylthio)phenyl]-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

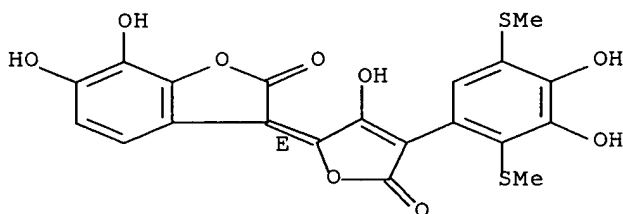
Double bond geometry as shown.



RN 329308-10-3 CAPLUS

CN 2(3H)-Benzofuranone, 3-[4-[3,4-dihydroxy-2,5-bis(methylthio)phenyl]-3-hydroxy-5-oxo-2(5H)-furanylidene]-6,7-dihydroxy-, (3E)- (9CI) (CA INDEX NAME)

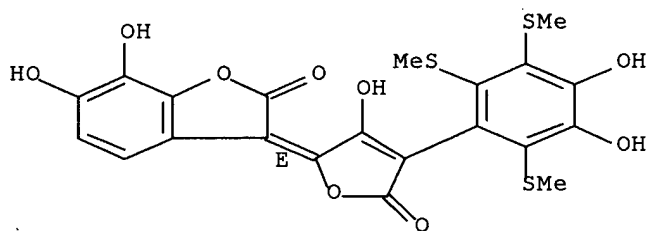
Double bond geometry as shown.



RN 329308-11-4 CAPLUS

CN 2(3H)-Benzofuranone, 3-[4-[3,4-dihydroxy-2,5,6-tris(methylthio)phenyl]-3-hydroxy-5-oxo-2(5H)-furanylidene]-6,7-dihydroxy-, (3E)- (9CI) (CA INDEX NAME)

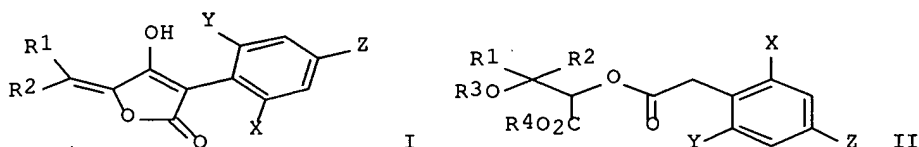
Double bond geometry as shown.



RE.CNT 12      THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 36 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 2000:198031 CAPLUS  
 DN 132:222436  
 TI Preparation of furanones and their use as herbicides and insecticides  
 IN Akiyoshi, Yuji; Tsutsumiuchi, Kiyoshi; Narita, Isamu; Okada, Tatsuo;  
 Nakamura, Kazuyuki; Nakamura, Akira  
 PA Ube Industries, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000086649	A2	20000328	JP 1998-256193	19980910
PRAI	JP 1998-256193		19980910		
OS	CASREACT 132:222436; MARPAT 132:222436				
GI					



AB Furanones I [R1, R2 = C1-6 alkyl; CR1R2 may form C3-7 cycloalkyl; X, Y, Z = H, C1-6 alkyl(oxy), halo] are prepd. by cyclization of (benzylcarboxyloxy)alkanoate esters II (R1, R2, X, Y, Z = same as above; R3, R4 = C1-6 alkyl) in the presence of bases in solvents. Cyclization of Et 3-methoxy-3-methyl-2-[2,4,6-trimethylbenzylcarboxyloxy]butanoate gave 38% I (R1 = R2 = X = Y = Z = Me), which at 30 ppm showed 100% insecticidal activity.

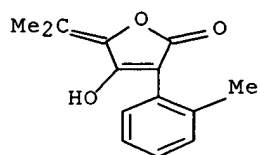
IT 261507-68-0P 261507-69-1P 261507-70-4P  
 261507-71-5P 261507-72-6P 261507-73-7P  
 261507-74-8P 261507-75-9P 261507-76-0P  
 261507-77-1P 261507-78-2P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. of furanones as herbicides and insecticides)

RN 261507-68-0 CAPLUS

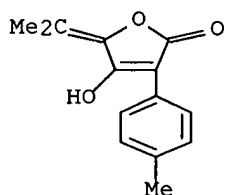
CN 2(5H)-Furanone, 4-hydroxy-5-(1-methylethylidene)-3-(2-methylphenyl)-  
 (9CI)

(CA INDEX NAME)



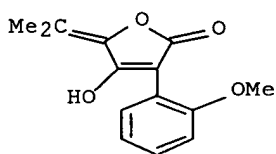
RN 261507-69-1 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-5-(1-methylethylidene)-3-(4-methylphenyl)-  
(9CI)  
(CA INDEX NAME)



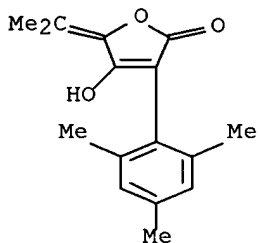
RN 261507-70-4 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-3-(2-methoxyphenyl)-5-(1-methylethylidene)-  
(9CI) (CA INDEX NAME)



RN 261507-71-5 CAPLUS

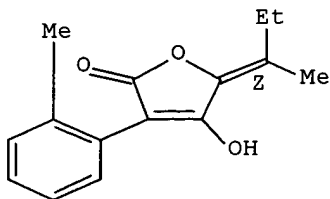
CN 2(5H)-Furanone, 4-hydroxy-5-(1-methylethylidene)-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)



RN 261507-72-6 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-3-(2-methylphenyl)-5-(1-methylpropylidene)-,  
(5Z)- (9CI) (CA INDEX NAME)

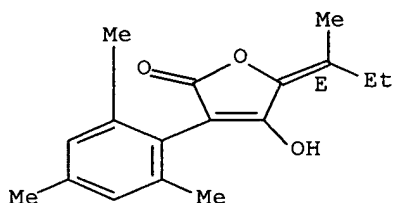
Double bond geometry as shown.



RN 261507-73-7 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-5-(1-methylpropylidene)-3-(2,4,6-trimethylphenyl)-, (5E)- (9CI) (CA INDEX NAME)

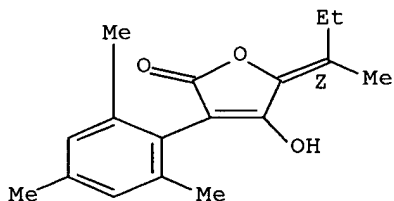
Double bond geometry as shown.



RN 261507-74-8 CAPLUS

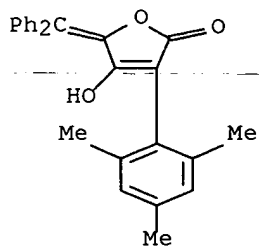
CN 2(5H)-Furanone, 4-hydroxy-5-(1-methylpropylidene)-3-(2,4,6-trimethylphenyl)-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



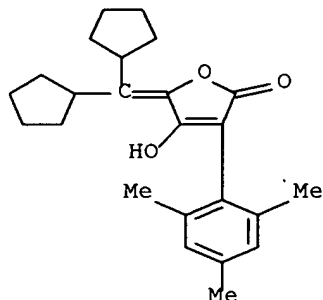
RN 261507-75-9 CAPLUS

CN 2(5H)-Furanone, 5-(diphenylmethylene)-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 261507-76-0 CAPLUS

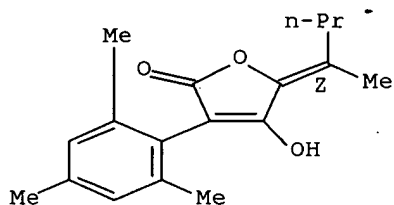
CN 2(5H)-Furanone, 5-(dicyclopentylmethylene)-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 261507-77-1 CAPLUS

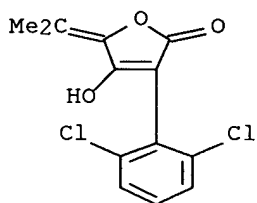
CN 2(5H)-Furanone, 4-hydroxy-5-(1-methylbutylidene)-3-(2,4,6-trimethylphenyl)-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



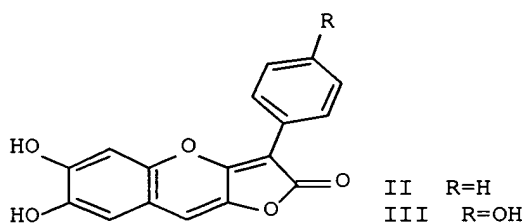
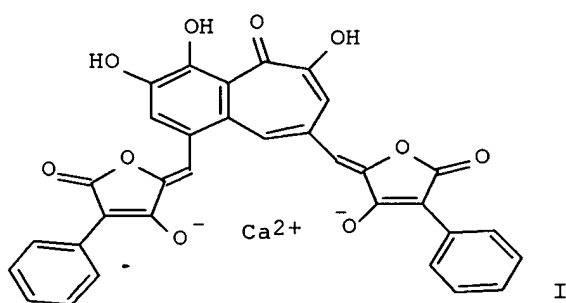
RN 261507-78-2 CAPLUS

CN 2(5H)-Furanone, 3-(2,6-dichlorophenyl)-4-hydroxy-5-(1-methylethylidene)- (9CI) (CA INDEX NAME)





L9 ANSWER 37 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 2000:148150 CAPLUS  
 DN 132:290822  
 TI Novel benzotropolone and 2H-furo[3,2-b]benzopyran-2-one pigments from  
 Tricholoma aurantium (Agaricales)  
 AU Klostermeyer, Dorte; Knops, Liliana; Sindlinger, Tilman; Polborn, Kurt;  
 Steglich, Wolfgang  
 CS Institut für Organische Chemie der Universität, München, D-81377,  
 Germany  
 SO European Journal of Organic Chemistry (2000), (4), 603-609  
 CODEN: EJOCFK; ISSN: 1434-193X  
 PB Wiley-VCH Verlag GmbH  
 DT Journal  
 LA English  
 GI



AB The bright orange-red color of the toadstool *Tricholoma aurantium* is due to the benzotropolone pigment aurantricholone. The compd. is at least partially present as the calcium salt (I). Minor pigments are the yellow

2H-furo[3,2-b]benzopyran-2-one derivs. aurantricholides A (II) and B (III), which exhibit strong green fluorescences. Their structures have been established by total syntheses.

IT 264886-23-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

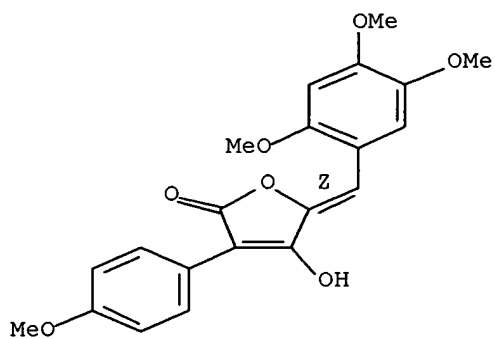
(Reactant or reagent)

(novel benzotropolone and furobenzopyranone pigments from *Tricholoma aurantium*)

RN 264886-23-9 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-3-(4-methoxyphenyl)-5-[(2,4,5-trimethoxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

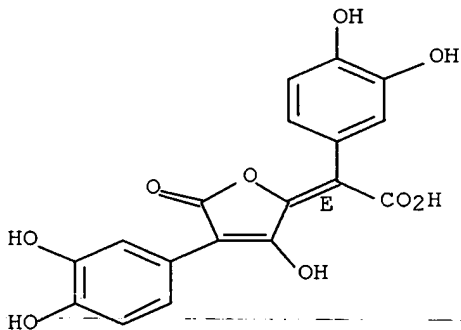
Double bond geometry as shown.



RE.CNT 19      THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

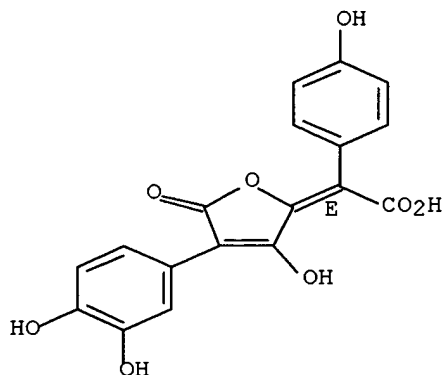
L9 ANSWER 45 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1998:814148 CAPLUS  
 DN 130:165516  
 TI Polyene pigments from fruit-bodies of *Boletus laetissimus* and *B. rufo-aureus* (basidiomycetes)  
 AU Kahner, Lydia; Dasenbrock, Johannes; Spiteller, Peter; Steglich, Wolfgang;  
 Marumoto, Ryuji; Spiteller, Michael  
 CS Institut für Organische Chemie der Universität, Munich, 80333, Germany  
 SO Phytochemistry (1998), 49(6), 1693-1697  
 CODEN: PYTCAS; ISSN: 0031-9422  
 PB Elsevier Science Ltd.  
 DT Journal  
 LA English  
 AB From fruit-bodies of the Japanese mushroom *Boletus laetissimus* two polyene pigments boletocrocin A and B were isolated and their structures detd. by spectroscopic methods. The compds. represent diamides of hexadecaheptaenedioic acid with isoleucine and either aspartic acid or asparagine. The L-configuration of the amino acids was established after acid hydrolysis. The structures of five structurally related minor pigments were elucidated by LC-ESIMS.  
 IT 20988-30-1P, Variegatic acid 25287-88-1P, Xerocomic acid 27286-59-5P, Variegatorubin  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)  
 (isolation of boletocrocin A and B, amino acid substituted polyene pigments, from *Boletus*)  
 RN 20988-30-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 25287-88-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

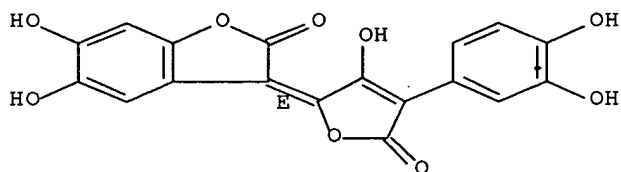
Double bond geometry as shown.



RN 27286-59-5 CAPLUS

CN 2(3H)-Benzofuranone, 3-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
furanylidene]-5,6-dihydroxy-, (3E)- (9CI) (CA INDEX NAME)

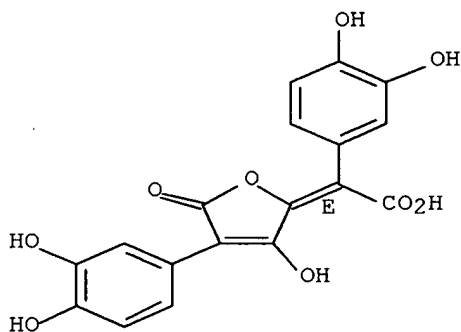
Double bond geometry as shown.



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

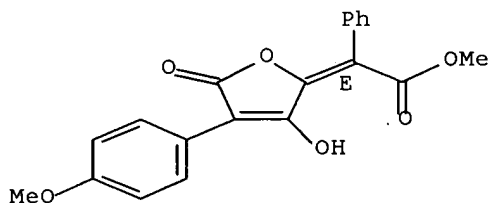
L9 ANSWER 56 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1995:846084 CAPLUS  
 DN 123:255020  
 TI Antioxidant activity of fungus *Suillus bovinus* (L: Fr.) O. Kuntze  
 AU Kasuga, Atsuko; Aoyagi, Yasuo; Sugahara, Tatsuyuki  
 CS Kagawa Nutrition Junior College, Tokyo, 170, Japan  
 SO Journal of Food Science (1995), 60(5), 1113-15  
 CODEN: JFDSA; ISSN: 0022-1147  
 PB Institute of Food Technologists  
 DT Journal  
 LA English  
 AB Two major antioxidative compds. were isolated from wild mushrooms, *Suillus bovinus* (L: Fr.) O. Kuntze, and studied for antioxidative activity by comparison with other antioxidants, BHA and tocopherol. One compd. was an orange pigment identified as variegatic acid (3,3',4,4'-tetrahydroxy pulvinic acid) and the other was an orange-red pigment, possibly diboviquinone-4,4. The variegatic acid had some antioxidative activity in an emulsion system as shown by peroxide value (POV) of linoleic acid and in an oil system as shown by the POV of Me linoleate and wt. gain of soybean oil. The second compd. was active only in the emulsion system.  
 IT 20988-30-1, Variegatic acid  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (antioxidant activity of fungus *Suillus bovinus*)  
 RN 20988-30-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



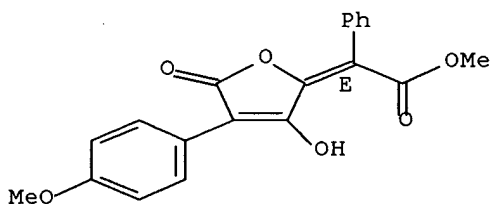
L9 ANSWER 60 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1994:599918 CAPLUS  
 DN 121:199918  
 TI Analysis of secondary metabolites from lichen by high performance liquid chromatography with a photodiode array detector  
 AU Yoshimura, Isao; Kinoshita, Yasuhiro; Yamamoto, Yoshikazu; Huneck, Siegfried; Yamada, Yasuyuki  
 CS Kochi Gakun College, Kochi, 780, Japan  
 SO Phytochemical Analysis (1994), 5(4), 197-205  
 CODEN: PHANEL; ISSN: 0958-0344  
 DT Journal  
 LA English  
 AB Secondary metabolites from Lichen, mainly phenolic compds., have been analyzed and identified using high performance liq. chromatog. with a photodiode array detector. Components of lichen thalli were detected by characteristic UV spectra and relative retention times. Some new minor components have been found in several lichens.  
 IT **481-64-1**, Pinastric acid  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
 PRP (Properties); BIOL (Biological study); OCCU (Occurrence)  
 (secondary metabolites from Lichen anal. by HPLC with photodiode array detector)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



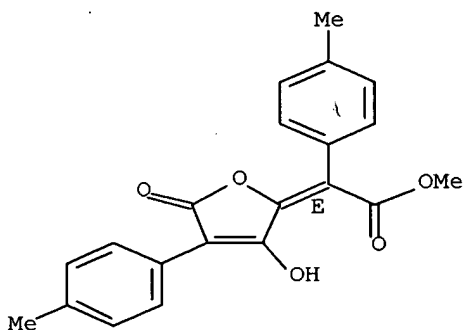
L9 ANSWER 61 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1994:599902 CAPLUS  
 DN 121:199902  
 TI Identification of lichen substances by a standardized high-performance liquid chromatographic method  
 AU Feige, G. B.; Lumbsch, H. T.; Huneck, S.; Elix, J. A.  
 CS Botanical Institute, University of Essen, P.O. Box 103 764, Essen, 45117, Germany  
 SO Journal of Chromatography (1993), 646(2), 417-27  
 CODEN: JOCRAM; ISSN: 0021-9673  
 DT Journal  
 LA English  
 AB A method for the identification of secondary arom. lichen substances using HPLC with reversed-phase columns, gradient elution and benzoic and solorinic acids as stds. has been developed. A retention index (I), calcd. from the elution time of the appropriate peak with ref. to the stds., is used in identification. The I values are recorded for 331 compds. chromatographed in this std. system.  
 IT **481-64-1**, Pinastric acid  
 RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)  
 (identification of, of lichen by reversed-phase HPLC)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 64 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1993:19072 CAPLUS  
 DN 118:19072  
 TI Antibacterial and antiproliferative activities of vulpinic acids in vitro  
 AU Nadir, M. T.; Rashan, L. J.; Ayoub, M. T.; Awni, L. T.  
 CS Al-Mansour Tech. Inst., Baghdad, Iraq  
 SO Farmaco (1992), 47(5), 643-7  
 CODEN: FRMCE8; ISSN: 0014-827X  
 DT Journal  
 LA English  
 AB The antimicrobial and antiproliferative activities of vulpinic acids were assayed in vitro. Activity was demonstrated by vulpinic acids on Gram-pos. bacteria only. The MIC values of these compds. range 3.8-31.5 .mu.g/mL. The significance of these results is discussed.  
 IT **37542-24-8 38746-90-6**  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (antibacterial activity of)  
 RN 37542-24-8 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

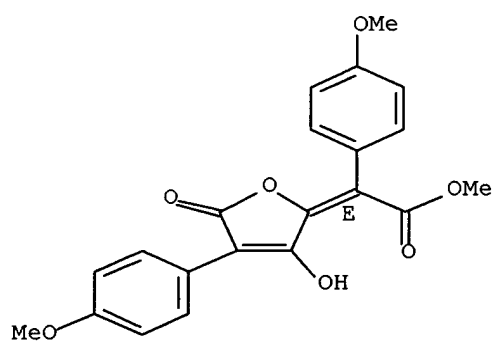
Double bond geometry as shown.



RN 38746-90-6 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-4-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



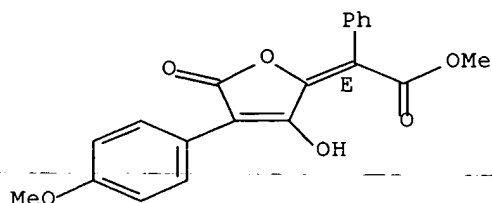


L9 ANSWER 66 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1991:679656 CAPLUS  
 DN 115:279656  
 TI Synthesis of grevillins, novel pyrandione pigments of fungi. Biogenetic interrelationships between grevillins, pulvinic acids, terphenylquinones and xylerythrins  
 AU Pattenden, Gerald; Pegg, Neil A.; Kenyon, Ronald W.  
 CS Dep. Chem., Univ. Nottingham, Nottingham, NG7 2RD, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1991), (10), 2363-72  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The synthesis of the grevillin group of pyrandione pigments I (R-R2 = H, HO) based on a biogenetic model used 4,3-R1R2C6H3CH2CH(OH)COCH2C6H4R-4 and  
 and oxalyl chloride as starting materials. Treatment of similar grevillins with NaOEt/EtOH resulted in quant. isomerization to terphenylquinone pigments II (R = H, Me, PhCH2O). Perkin-type cyclocondensations of I  
 (R, R1 = H, HO; R2 = H) with arylacetic acids gave xylerythrin pigments III (R3 = H, HO, H2N), whereas rearrangement in the presence of DMSP gave pulvinic acids IV. These synthetic studies interrelate the biosynthetic origins of grevillins, pulvinic acids, terphenylquinones, and xylerythrins together along with pulvinone and furanone fungal pigments.  
 IT **481-64-1P**, Pinastric acid  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)  
 (prepn. and O-methylation or sapon. of)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

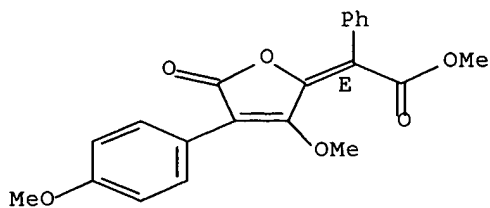


IT **22736-30-7P 110087-44-0P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 22736-30-7 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

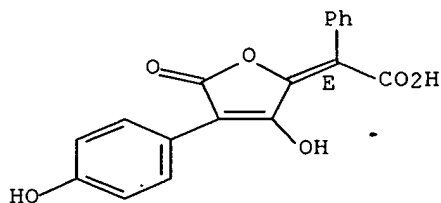
Double bond geometry as shown.



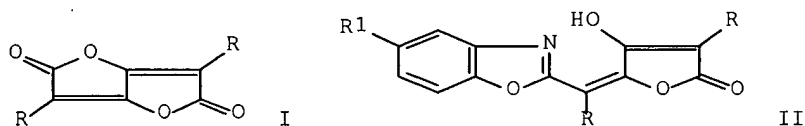
RN 110087-44-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-  
furanylidene]-, (E)- (9CI) (CA INDEX NAME)

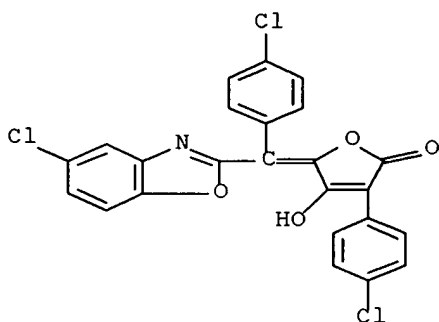
Double bond geometry as shown.



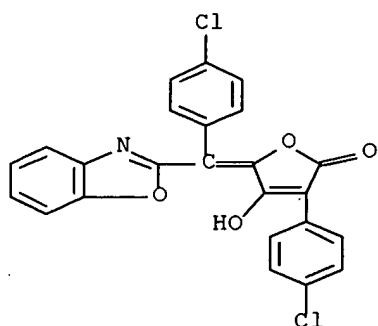
L9 ANSWER 67 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1991:471449 CAPLUS  
 DN 115:71449  
 TI New benzoxazole derivatives from pulvinic dilactones  
 AU Rao, P. S.; Raju, K. Raghava; Raju, K. Ramesh  
 CS Dep. Chem., Kakatiya Univ., Warangal, 506 009, India  
 SO Indian Journal of Chemistry, Section B: Organic Chemistry Including  
 Medicinal Chemistry (1991), 30B(6), 595-7  
 CODEN: IJSBDB; ISSN: 0376-4699  
 DT Journal  
 LA English  
 OS CASREACT 115:71449  
 GI



AB Pulvinic dilactones I (R = Ph, 4-ClC<sub>6</sub>H<sub>4</sub>, 4-MeOC<sub>6</sub>H<sub>4</sub>) react with  
 2,4-(H<sub>2</sub>N)R<sub>1</sub>C<sub>6</sub>H<sub>3</sub>OH (R<sub>1</sub> = H, Cl, NO<sub>2</sub>) in polyphosphoric acid to give  
 (benzoxazolylbenzylidene)furanones II.  
 IT **135275-47-7P 135275-48-8P 135275-49-9P**  
**135275-51-3P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 135275-47-7 CAPLUS  
 CN 2(5H)-Furanone, 5-[(5-chloro-2-benzoxazolyl)(4-chlorophenyl)methylene]-  
 3-  
 (4-chlorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)

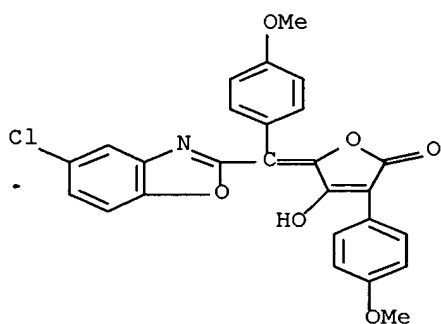


RN 135275-48-8 CAPLUS  
 CN 2(5H)-Furanone, 5-[2-benzoxazolyl(4-chlorophenyl)methylene]-3-(4-  
 chlorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



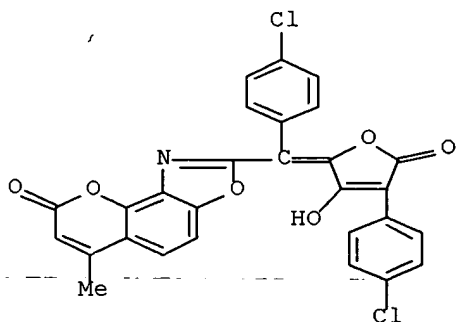
RN 135275-49-9 CAPLUS

CN 2(5H)-Furanone, 5-[(5-chloro-2-benzoxazolyl)(4-methoxyphenyl)methylene]-  
4-  
hydroxy-3-(4-chlorophenyl)- (9CI) (CA INDEX NAME)

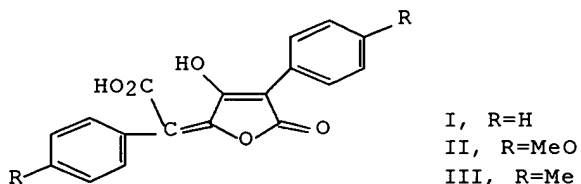


RN 135275-51-3 CAPLUS

CN 8H-Pyrano[2,3-e]benzoxazol-8-one, 2-[(4-chlorophenyl)[4-(4-  
chlorophenyl)-3-  
hydroxy-5-oxo-2(5H)-furanylidene]methyl]-6-methyl- (9CI) (CA INDEX  
NAME)

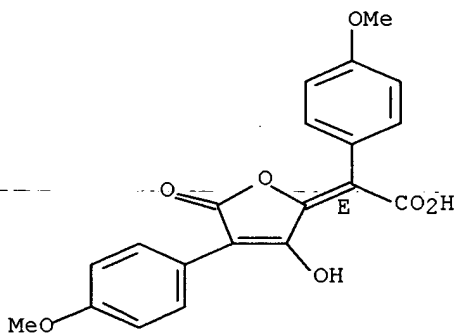


L9 ANSWER 70 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1991:78494 CAPLUS  
 DN 114:78494  
 TI Vulpinic acids inhibit influenza (RNA) viruses but not herpes (DNA) viruses  
 AU Rashan, Luay J.; Ayoub, Mikdad T.; Al-Omar, Laylar; Al-Khayatt, Ramzia  
 CS Coll. Educ., Univ. Mosul, Mosul, Iraq  
 SO World Journal of Microbiology & Biotechnology (1990), 6(2), 155-8  
 CODEN: WJMBEY; ISSN: 0959-3993  
 DT Journal  
 LA English  
 GI



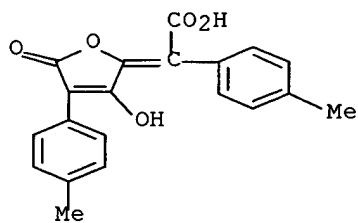
AB These synthetic vulpinic acids, (I-III) inhibited 2 influenza RNA viruses, type A (Philippine) and B (Paraha), in tissue culture with ID50 values of 3.9-15.5 .mu.g/mL. They had no activity against a 3rd influenza virus or against 2 herpes viruses.  
 IT 50689-11-7 131826-55-6  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (virucidal activity of)  
 RN 50689-11-7 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanlydene]-4-methoxy-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

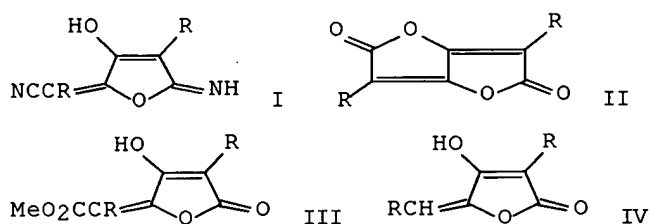


RN 131826-55-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-  
furanylidene]-4-methyl- (9CI) (CA INDEX NAME)

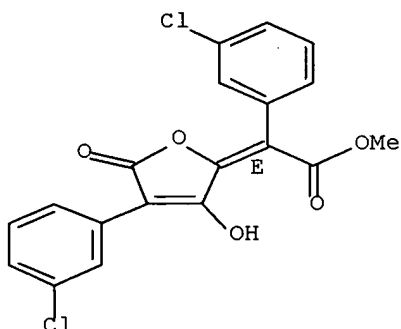


L9 ANSWER 72 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1991:23276 CAPLUS  
 DN 114:23276  
 TI Mass spectra of vulpinic acids and some related compounds  
 AU Ayoub, M. T.; Said, M. S.; Bashi, G. M. Gussab  
 CS Coll. Sci., Univ. Mosul, Iraq  
 SO Iraqi Journal of Science (1990), 30(4), 489-95  
 CODEN: IRJSD5; ISSN: 0067-2904  
 DT Journal  
 LA English  
 GI



AB An interpretation of the mass spectrum of some iminolactones (I),  
 pulvinic  
 lactones (II) and vulpinic acids (III) [R = (un)substituted Ph in all  
 cases] are proposed on the basis of the mass spectral fragmentation  
 patterns of the model compds. (IV).  
 IT **32883-73-1 37542-24-8 37542-25-9**  
 RL: PRP (Properties)  
 (mass spectrum of)  
 RN 32883-73-1 CAPLUS  
 CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-  
 oxo-  
 2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

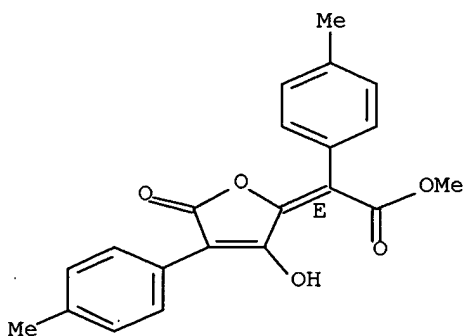
Double bond geometry as shown.



RN 37542-24-8 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-  
 furanylidene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

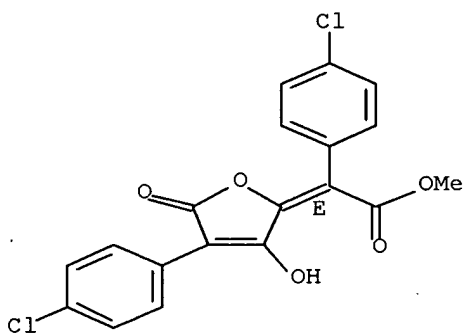




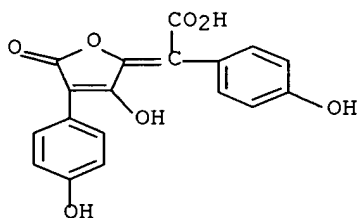
RN 37542-25-9 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2-(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

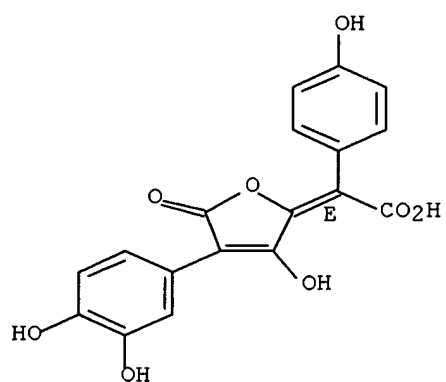


L9 ANSWER 74 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1989:453328 CAPLUS  
 DN 111:53328  
 TI Complexation of cesium-137 with the top pigment of maronenroehrlings  
 (Xerocomus badius)  
 AU Aumann, Dieter C.; Clooth, Gabriele; Steffan, Bert; Steglich, Wolfgang  
 CS Inst. Org. Chem. Biochem., Univ. Bonn, Bonn, D-5300/1, Fed. Rep. Ger.  
 SO Angewandte Chemie (1989), 101(4), 495-6  
 CODEN: ANCEAD; ISSN: 0044-8249  
 DT Journal  
 LA German  
 AB In the cap skin of Polish mushroom *X. badius* [which contains the brown  
 pigments badiene A (I) and norbadiene A (II)] collected in 1987 in the  
 German Federal Republic, <sup>137</sup>Cs specific radioactivity was 3.4-fold  
 higher  
 than in the rest of the fruiting body. In the closely related species  
*Boletus edulis* (which does not contain I or II), the ratio was 0.6. In  
 II  
 isolated from *X. badius*, the ratio was 87. Pure II complex with Cs  
 (1:1)  
 was fully decompd. on a Dowex 50-W-X4 column. Atromentic acid and its  
 Me  
 ester and xerocomic acid had lower affinity to Cs than II. In the cap  
 skin of *B. erythropus* from the same region, the Cs accumulation was  
 2.6-fold. In the cap skin of *B. mirabilis* collected in Sept. 1987 in  
 western Canada, the accumulation was at least twice as high as in the *X.*  
*badius* in Germany; thus, <sup>137</sup>Cs apparently did not originate from  
 Chernobyl.  
 IT 521-56-2, Atromentic acid 25287-88-1, Xerocomic acid  
 54805-70-8  
 RL: BIOL (Biological study)  
 (cesium-137 complex formation with)  
 RN 521-56-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-  
 oxo-  
 2(5H)-furanlydene]- (9CI) (CA INDEX NAME)



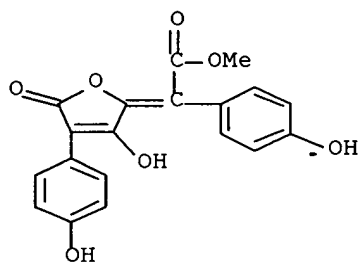
RN 25287-88-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-  
 2(5H)-  
 furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 54805-70-8 CAPLUS

CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2-(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 76 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1989:132218 CAPLUS

DN 110:132218

TI Quantitative variation in vulpinic and pinastric acids produced by Tuckermannopsis pinastri (lichen-forming ascomycotina, Parmeliaceae)

AU Golojuch, S. Thomas; Lawrey, James D.

CS Dep. Biol., George Mason Univ., Fairfax, VA, 22030, USA

SO American Journal of Botany (1988), 75(12), 1871-5

CODEN: AJBOAA; ISSN: 0002-9122

DT Journal

LA English

AB T. pinastri is a lichen species found commonly on rocks and tree branches

in boreal and alpine habitats in the northern United States. Members of this species produce 3 yellow-pigmented phenolic compds.: usnic, pinastric, and vulpinic acids. The variation in concn. of the latter 2 compds. was quantified in relation to substrate factors, chlorophyll content, and thallus size. By HPLC, 120 thalli of T. pinastri,

collected

randomly from a single large population located at Spruce Knob, West Virginia, were analyzed. Although individuals were sampled from both

tree

and rock substrates that differed markedly in light intensity, these environmental factors were not correlated with obsd. variations in vulpinic or pinastric acid concns. Instead, compd. concns. were correlated most closely with thallus size, with small rather than large thalli having the highest concns. of the 2 compds. Small thalli did not have higher concns. of chlorophylls than large thalli, however, which suggests that the rate of prodn. of secondary compds. by the fungus in

T.

pinastri is independent of algal biomass. Inasmuch as lichen secondary compds. serve a defensive role against microorganisms and herbivores, small, juvenile thalli may be better defended than more mature thalli.

IT 481-64-1, Pinastric acid

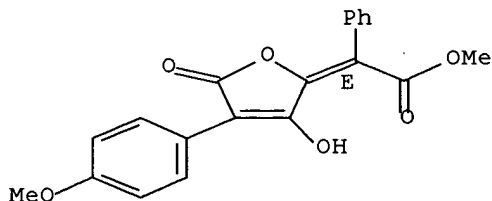
RL: BIOL (Biological study)

(in Tuckermannopsis pinastri, growth and aging effects on)

RN 481-64-1 CAPLUS

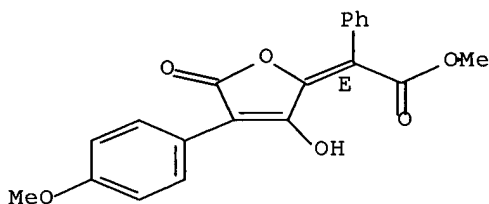
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

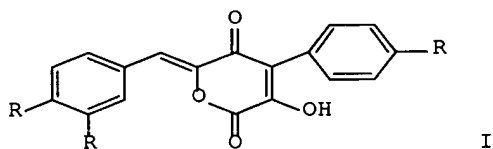


L9 ANSWER 79 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1988:489797 CAPLUS  
 DN 109:89797  
 TI Lichen constituents. Part 149: Components of some lichens from Mongolia  
 AU Huneck, S.; Tuja, D.; Cogt, U.  
 CS Inst. Biochem., Akad. Wiss. DDR, Halle/Saale, Ger. Dem. Rep.  
 SO Pharmazie (1988), 43(5), 371-2  
 CODEN: PHARAT; ISSN: 0031-7144  
 DT Journal  
 LA German  
 AB *Aspicilia vagans* From the Mongolian Altai contained triglycerides and phytosterols. *Cetraria tilesii* Contained pinastric, (-)-usnic, and vulpinic acids, *Dactylina madreporiformis* contained (+)-usnic and (-)-nephromopsic acids, *Rhizoplaca baranowii* contained (-)-usnic and psoromic acids, triglycerides, and phytosterols, and *Xanthoria elegans* contained parietin.  
 IT **481-64-1**, Pinastric acid  
 RL: BIOL (Biological study)  
 (in lichens from Mongolian Altai)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

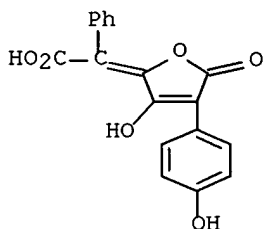
Double bond geometry as shown.



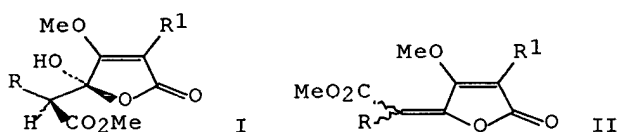
L9 ANSWER 80 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1988:221447 CAPLUS  
 DN 108:221447  
 TI Synthesis of grevillins and their biogenetic interrelationship with  
 terphenylquinones, xylerythrins and pulvinic acids  
 AU Pattenden, Gerald; Pegg, Neil A.; Kenyon, Ronald W.  
 CS Dep. Chem., Univ. Nottingham, Nottingham, NG7 2RD, UK  
 SO Tetrahedron Letters (1987), 28(40), 4749-52  
 CODEN: TELEAY; ISSN: 0040-4039  
 DT Journal  
 LA English  
 OS CASREACT 108:221447  
 GI



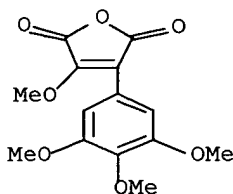
AB The grevillin pigments I (R = H, OH) present in fungi, were prepd. from  
 benzylacyloins, as key intermediates. The biogenetic interrelationships  
 between I and the terphenylquinone, xylerythrin and pulvinic acid  
 families  
 of natural coloring materials is exemplified with the in vitro  
 conversions  
 of I to these products.  
 IT **114590-97-5P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 114590-97-5 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-  
 furanylidene]- (9CI) (CA INDEX NAME)



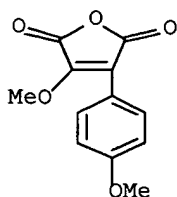
L9 ANSWER 82 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1987:515405 CAPLUS  
 DN 107:115405  
 TI New syntheses of pulvinic acids via Reformatsky-type reactions with aryl methoxymaleic anhydrides  
 AU Gedge, David R.; Pattenden, Gerald; Smith, Anthony G.  
 CS Dep. Chem., Univ. Nottingham, Nottingham, NG7 2RD, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1986), (12), 2127-31  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 OS CASREACT 107:115405  
 GI



AB Reaction of the Zn enolates of  $\text{RCH}_2\text{CO}_2\text{Me}$  [ $\text{R} = 4\text{-MeOC}_6\text{H}_4$ , 3,4,5-(MeO) $\text{C}_6\text{H}_2$ , 2-MeOC $\text{C}_6\text{H}_4$ ] with 2-aryl-3-methoxymaleic anhydrides gave .beta.-hydroxy esters I [ $\text{R}_1 = 3,4,5\text{-(MeO)C}_6\text{H}_2$ , Ph, 4-MeOC $\text{C}_6\text{H}_4$ ], which were dehydrated to permethylated E- and Z-pulvinic acids II. II were demethylated to the pulvinic acids, including gomphidic, isogomphidic, and atromentic acid, with  $\text{Me}_3\text{SiI}$ .  
 IT **61418-12-0**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (Reformatskii reaction of, with methoxyphenylacetate)  
 RN 61418-12-0 CAPLUS  
 CN 2,5-Furandione, 3-methoxy-4-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)



IT **49829-96-1**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (Reformatskii reaction of, with trimethoxyphenylacetate)  
 RN 49829-96-1 CAPLUS  
 CN 2,5-Furandione, 3-methoxy-4-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



IT 104206-29-3P 110087-40-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

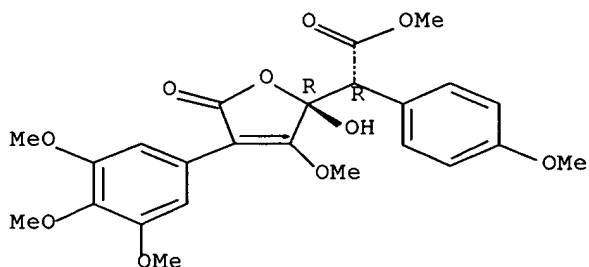
(Reactant or reagent)

(prepn. and dehydration of)

RN 104206-29-3 CAPLUS

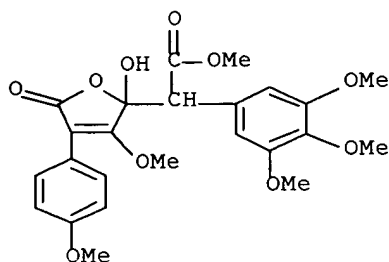
CN 2-Furanacetic acid, 2,5-dihydro-2-hydroxy-3-methoxy-.alpha.-(4-methoxyphenyl)-5-oxo-4-(3,4,5-trimethoxyphenyl)-, methyl ester, (R\*,R\*)-(9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 110087-40-6 CAPLUS

CN 2-Furanacetic acid, 2,5-dihydro-2-hydroxy-3-methoxy-4-(4-methoxyphenyl)-5-oxo-.alpha.-(3,4,5-trimethoxyphenyl)-, methyl ester (9CI) (CA INDEX NAME)



IT 22736-30-7P, Methyl pinastrate 90295-65-1P

104206-34-0P 104206-37-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

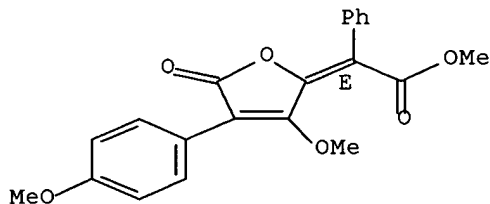


(prepn. and demethylation of)

RN 22736-30-7 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

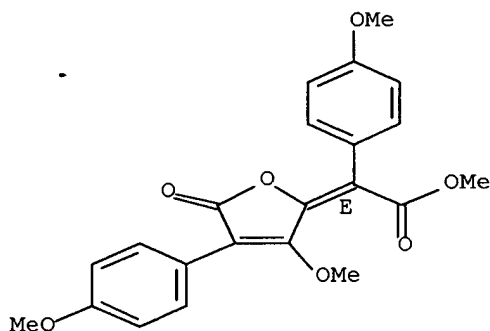
Double bond geometry as shown.



RN 90295-65-1 CAPLUS

CN Benzeneacetic acid, 4-methoxy-.alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-  
oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

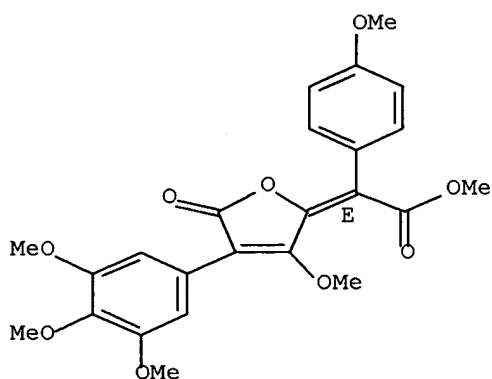
Double bond geometry as shown.



RN 104206-34-0 CAPLUS

CN Benzeneacetic acid, 4-methoxy-.alpha.-[3-methoxy-5-oxo-4-(3,4,5-  
trimethoxyphenyl)-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA  
INDEX NAME)

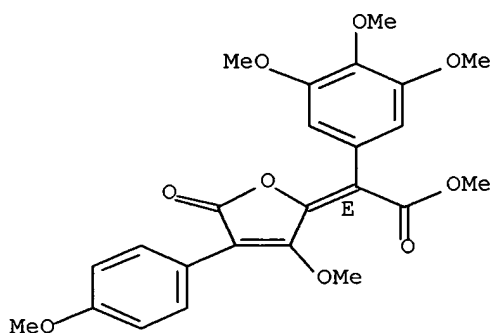
Double bond geometry as shown.



RN 104206-37-3 CAPLUS

CN Benzeneacetic acid, 3,4,5-trimethoxy-.alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 110087-46-2P 110087-47-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

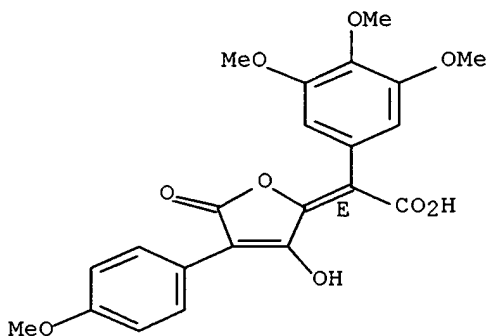
(Reactant or reagent)

(prepn. and methylation of)

RN 110087-46-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-3,4,5-trimethoxy-, (E)- (9CI) (CA INDEX NAME)

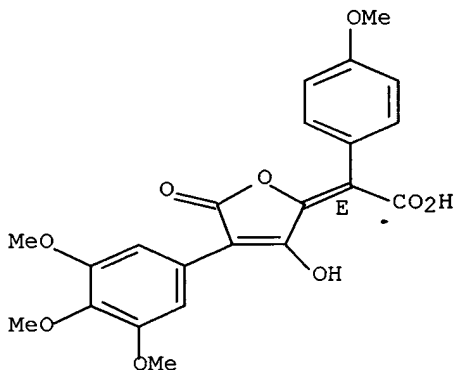
Double bond geometry as shown.



RN 110087-47-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furan-2-ylidene]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



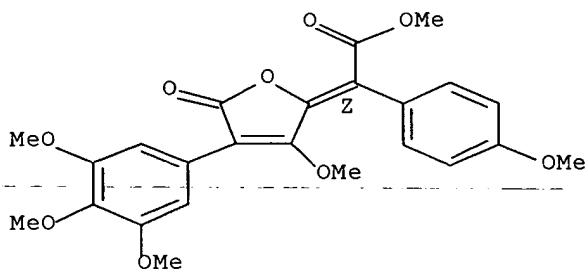
IT 104206-35-1P 104206-36-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 104206-35-1 CAPLUS

CN Benzeneacetic acid, 4-methoxy-.alpha.-[3-methoxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furan-2-ylidene]-, methyl ester, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

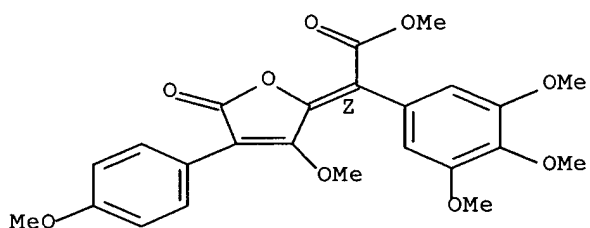


RN 104206-36-2 CAPLUS

CN Benzeneacetic acid, 3,4,5-trimethoxy-.alpha.-[3-methoxy-4-(4-

methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

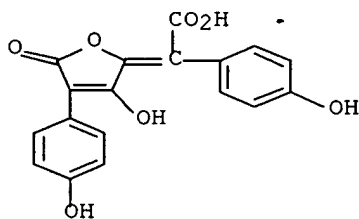


IT 521-56-2P 25328-77-2P 104222-55-1P  
110087-44-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(total synthesis of)

RN 521-56-2 CAPLUS

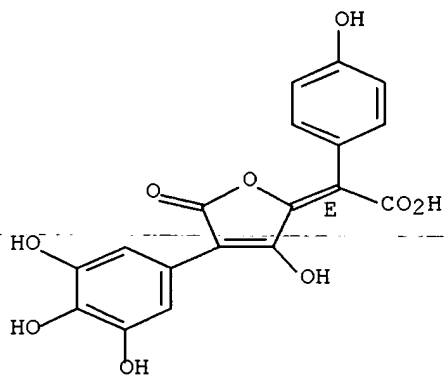
CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



RN 25328-77-2 CAPLUS

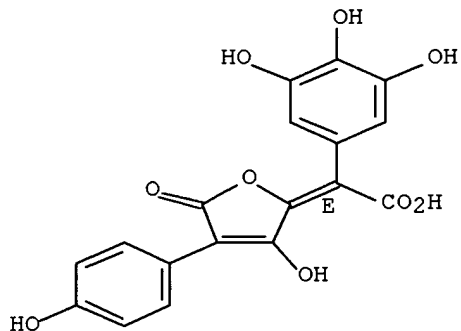
CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trihydroxyphenyl)-2(5H)-furanylidene]-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



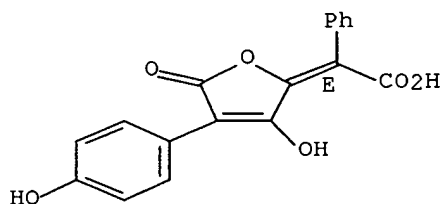
RN 104222-55-1 CAPLUS  
 CN Benzeneacetic acid, 3,4,5-trihydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

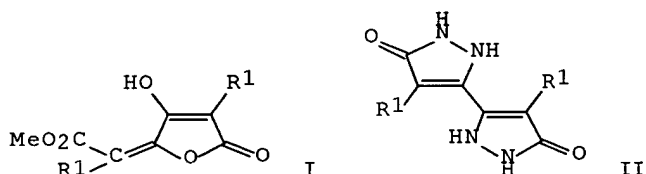


RN 110087-44-0 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

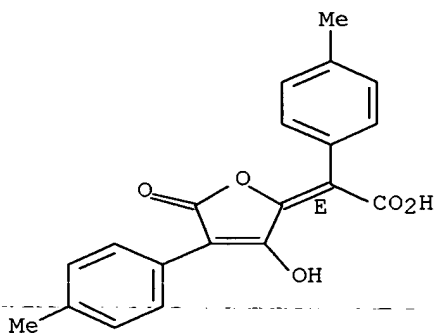


L9 ANSWER 83 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1987:496528 CAPLUS  
 DN 107:96528  
 TI Synthesis and reaction of some substituted butenolides  
 AU Ayoub, M. T.; Bashi, G. M. Gussab  
 CS Coll. Sci., Univ. Mosul, Mosul, Iraq  
 SO Journal of the Iraqi Chemical Society (1986), 11(1), 79-88  
 CODEN: JICSDK; ISSN: 0379-8321  
 DT Journal  
 LA English  
 OS CASREACT 107:96528  
 GI



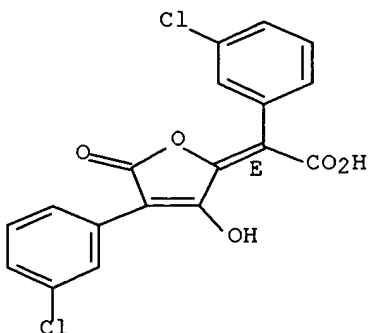
AB Vulpinic acids I ( $R_1 = \text{Ph, tolyl, ClC}_6\text{H}_4$ ) were prep'd., and they were treated with  $\text{N}_2\text{H}_4$  to give bis-pyrazolones II. Phenylacetonitriles  $\text{R}_1\text{CH}_2\text{CN}$  and  $\text{EtO}_2\text{CCO}_2\text{Et}$  gave dihydrofuran derivs. which were converted to I in three steps.  
 IT **38747-07-8P 109926-24-1P 109926-25-2P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent)  
       (prepn. and lactonization of)  
 RN 38747-07-8 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 109926-24-1 CAPLUS  
 CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

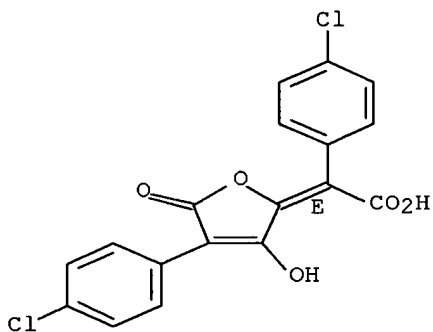


RN 109926-25-2 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-

2(5H)-furanylidene]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 32883-73-1P 37542-24-8P 37542-25-9P

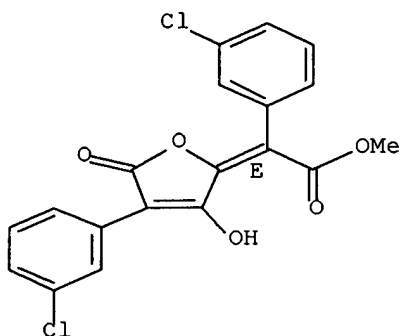
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 32883-73-1 CAPLUS

CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-

2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

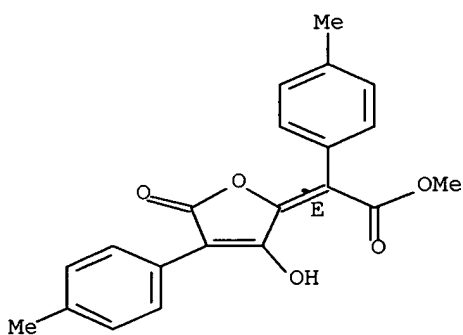
Double bond geometry as shown.



RN 37542-24-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furan-2-ylidene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

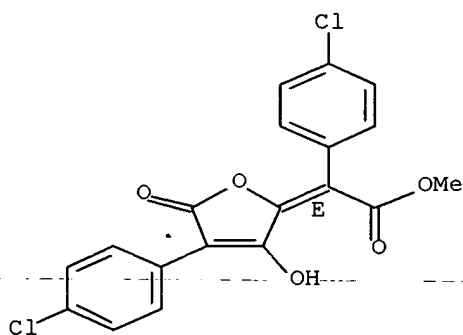
Double bond geometry as shown.



RN 37542-25-9 CAPLUS

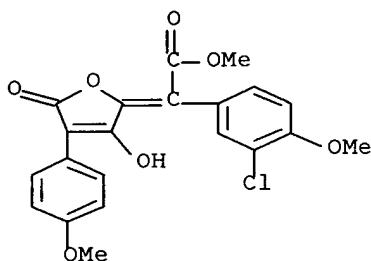
CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

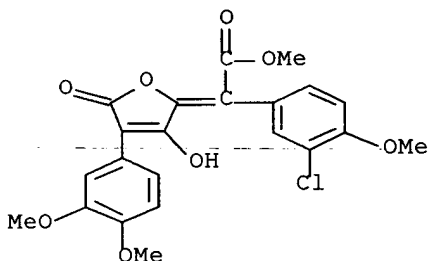




L9 ANSWER 84 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1986:221710 CAPLUS  
 DN 104:221710  
 TI New pulvinic acid derivatives from *Pulveroboletus* species (Boletales)  
 AU Marumoto, Ryuji; Kilpert, Claus; Steglich, Wolfgang  
 CS Rokko Pilzlab., Ashiya, Japan  
 SO Zeitschrift fuer Naturforschung, C: Journal of Biosciences (1986),  
 41(3),  
 363-5  
 CODEN: ZNCBDA; ISSN: 0341-0382  
 DT Journal  
 LA German  
 AB Vulpinic acid was isolated from sporophores of *P. ravenelii*, its first  
 reported occurrence in a Basidiomycete. Permethyl ethers of Me  
 xerocomate  
 and Me atromentate and its corresponding monochloro derivs. were  
 identified from *P. auriflammeus* of Japanese origin.  
 IT **102193-25-9 102193-26-0 102281-61-8**  
**102339-33-3**  
 RL: BIOL (Biological study)  
 (from *Pulveroboletus auriflammeus*)  
 RN 102193-25-9 CAPLUS  
 CN Benzeneacetic acid, 3-chloro-.alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-  
 oxo-  
 2(5H)-furanylidene]-4-methoxy-, methyl ester (9CI) (CA INDEX NAME)

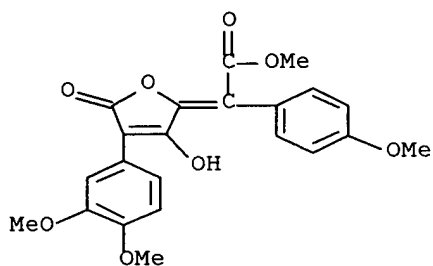


RN 102193-26-0 CAPLUS  
 CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-  
 5-  
 oxo-2(5H)-furanylidene]-4-methoxy-, methyl ester (9CI) (CA INDEX NAME)

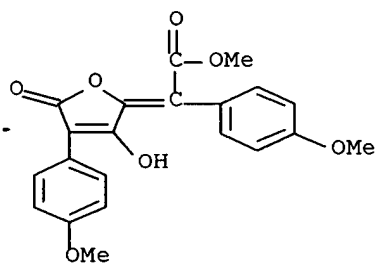


RN 102281-61-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-4-methoxy-, methyl ester (9CI) (CA INDEX NAME)

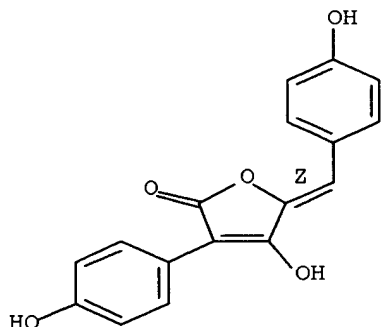


RN 102339-33-3 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
 furanylidene]-4-methoxy-, methyl ester (9CI) (CA INDEX NAME)



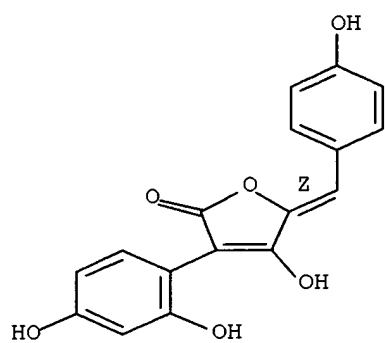
L9 ANSWER 87 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1985:418810 CAPLUS  
 DN 103:18810  
 TI Aspulvinone dimethylallyltransferase  
 AU Sagami, Ikuko; Ojima, Nobutoshi; Ogura, Kyozo; Seto, Shuichi  
 CS Res. Inst. Tuberc. Cancer, Tohoku Univ., Sendai, 980, Japan  
 SO Methods in Enzymology (1985), 110 (Steroids Isoprenoids, Pt. A), 320-6  
 CODEN: MENZAU; ISSN: 0076-6879  
 DT Journal  
 LA English  
 AB A discussion is presented on the purifn., properties, and assay method for aspulvinone dimethylallyltransferase (I) of *Aspergillus terreus*. I was obtained from mycelia of *A. terreus* and purified 122-fold (overall) by (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> fractionation and chromatog. on DEAE-Sephadex A-50, Sephadex G-200, and hydroxylapatite. The mol. wt. of I was estd. to be 240,000-270,000 by gel filtration; by using SDS-polyacrylamide gel electrophoresis, a single band of mol. wt. 45,000 was obsd., suggesting I consists of 6 subunits. The K<sub>m</sub> values were 40.0, 13.7, and 7.7 .mu.M for dimethylallyl pyrophosphate, aspulvinone E, and aspulvinone G, resp. The effects of metal ions, detergents, and inhibitors are described.  
 IT **49637-60-7 55215-40-2**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with aspulvinone dimethylallyltransferase of *Aspergillus terreus*, kinetics of)  
 RN 49637-60-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME) .

Double bond geometry as shown.

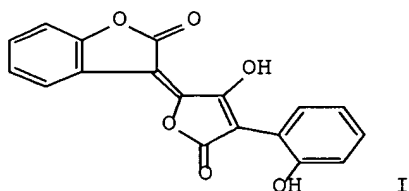


RN 55215-40-2 CAPLUS  
 CN 2(5H)-Furanone, 3-(2,4-dihydroxyphenyl)-4-hydroxy-5-[(4-hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 88 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1985:406121 CAPLUS  
 DN 103:6121  
 TI Synthesis of 2,2'-dimethoxypulvic acid and enolic structure of its demethylation product, 2-hydroxycalycin  
 AU Kuehler, Thomas C.; Nilsson, Martin; Sandberg, Ulla; Wachtmeister, Carl Axel  
 CS Dep. Org. Chem., Chalmers Univ., Goteborg, S-412 96, Swed.  
 SO Finnish Chemical Letters (1984), (4-5), 112-15  
 CODEN: FCMLAS; ISSN: 0303-4100  
 DT Journal  
 LA English  
 GI



AB 2-Hydroxycalycin (I), an analog to the lichen compd. calycin, was synthesized via 2,5-bis(2-methoxyphenyl)-3,4-dioxoadiponitrile. Its structure was verified mainly by <sup>1</sup>H-NMR spectrometry, which shows the presence of only one strong intramol. hydrogen bond.

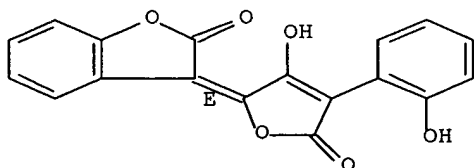
IT **96700-90-2P**

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

RN 96700-90-2 CAPLUS

CN 2(3H)-Benzofuranone, 3-[3-hydroxy-4-(2-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



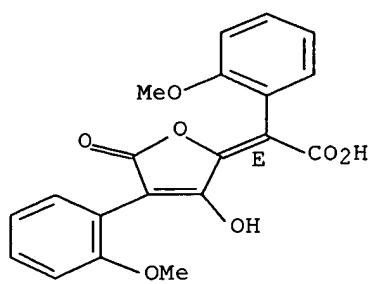
IT **96700-88-8P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn., lactonization and demethylation of)

RN 96700-88-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(2-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-2-methoxy-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 89 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1985:149015 CAPLUS  
 DN 102:149015  
 TI Anticoagulant 3-aryl-5-benzylidenetetrone acids  
 AU Rehse, Klaus; Lehmke, Josefa  
 CS Inst. Pharm., Freien Univ. Berlin, Berlin, 1000/33, Fed. Rep. Ger.  
 SO Archiv der Pharmazie (Weinheim, Germany) (1985), 318(1), 11-14  
 CODEN: ARPMAS; ISSN: 0365-6233  
 DT Journal  
 LA German  
 OS CASREACT 102:149015  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

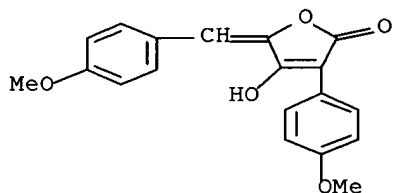
AB Heating the hydroxycyclopentanedione tautomers I-II at 210-230.degree. gave the tetrone acids III-IV (R, R1 = H, F) and III (R = R1 = H, Cl, MeO), which had anticoagulant activity in rats, but with severe side effects. Hydrogenation of III (R = R1 = H) gave a compd. with no activity or acute toxicity.

IT 49637-64-1P 95602-26-9P 95602-27-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. and anticoagulant activity of)

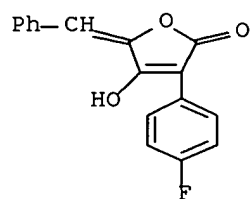
RN 49637-64-1 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methylene]- (9CI) (CA INDEX NAME)



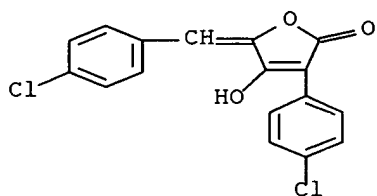
RN 95602-26-9 CAPLUS

CN 2(5H)-Furanone, 3-(4-fluorophenyl)-4-hydroxy-5-(phenylmethylene)- (9CI) (CA INDEX NAME)




RN 95602-27-0 CAPLUS

CN 2(5H)-Furanone, 3-(4-chlorophenyl)-5-[(4-chlorophenyl)methylene]-4-hydroxy-  
(9CI) (CA INDEX NAME)







R = H, R1 = p-OH, R2 = OH) were prepd. through reaction of spirocyclohexanedioxolanones II (R = Ph, C<sub>6</sub>H<sub>3</sub>(OCH<sub>2</sub>Ph)<sub>2-3,4</sub>) with Li enolates of phenylacetic esters in THF under N at -78.degree. to room temp.

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, from arylidenespirocyclohexanedioxolanone)

CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

O=C1C(=C(C(=O)O)C=C1C2=CC(=C(C=C2)O)O)C3=CC(=C(C=C3)O)O

IT 93796-47-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(prepn., hydrogenation, and hydrolysis of)

RN 93796-47-5 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[3,4-bis(phenylmethoxy)phenyl]-3-hydroxy-

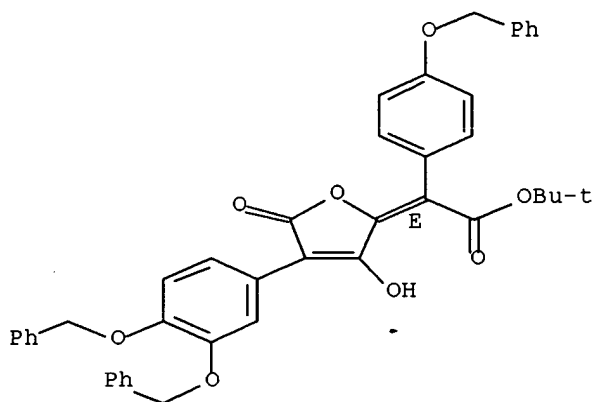
5-

oxo-2(5H)-furanylidene]-4-(phenylmethoxy)-, 1,1-dimethylethyl ester,

(E)-

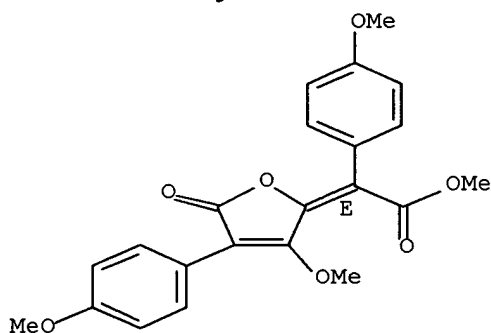
(9CI) (CA INDEX NAME)

Double bond geometry as shown.



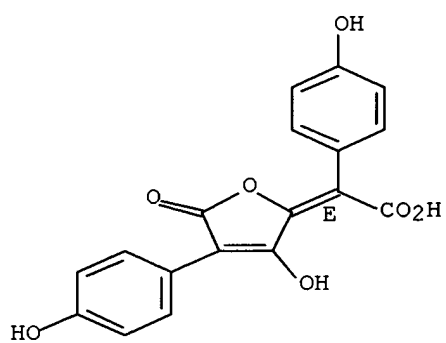
L9 ANSWER 92 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1984:435608 CAPLUS  
 DN 101:35608  
 TI Fungal pigments. Part 44. Cap pigments from the chestnut bolete tubes  
 (Xerocomus badius)  
 AU Steffan, Bert; Steglich, Wolfgang  
 CS Inst. Org. Chem. Biochem., Univ. Bonn, Bonn, D-5300/1, Fed. Rep. Ger.  
 SO Angewandte Chemie (1984), 96(6), 435-7  
 CODEN: ANCEAD; ISSN: 0044-8249  
 DT Journal  
 LA German  
 AB The pigments badion A, norbadion A, bisnorbadion A, and  
 O-methylpulviquinone A were sepd. from the MeOH/Me2CO ext. of the cap of  
 X. badius by chromatog. on Sephadex LH 20. They were easily identified  
 on TLC plates by color reactions with NH3.  
 IT **90295-65-1 90320-59-5**  
 RL: BIOL (Biological study)  
 (carbon-13 NMR data for)  
 RN 90295-65-1 CAPLUS  
 CN Benzeneacetic acid, 4-methoxy-.alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-  
 oxo-  
 2(5H)-furanlydene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 90320-59-5 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-  
 oxo-  
 2(5H)-furanlydene]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 93 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1984:118118 CAPLUS

DN 100:118118

TI Vulpinic and pinastric acids as lichen antiherbivore compounds:  
contrary  
evidence

AU Lawrey, James D.

CS Dep. Biol., George Mason Univ., Fairfax, VA, 22030, USA

SO Bryologist (1984), Volume Date 1983, 86(4), 365-9

CODEN: BRYOAM; ISSN: 0007-2745

DT Journal

LA English

AB The lichen-eating slug *Pallifera varia* consistently ate disks cut from  
the

thallus of *Cetraria pinastri*, which produces vulpinic and pinastric  
acids,

and rejected those from the morphol. similar *C. oakesiana*, which  
produces

fatty acids including caperatic acid. Acetone exts. of the preferred *C.*  
*pinastri* did not deter feeding activity by the slugs, but those of the  
avoided *C. oakesiana* did. Concns. of vulpinic and pinastric acids in

the

thalli of *C. pinastri* appear to be too low to deter *P. varia* grazing.  
Caperatic acid and the other fatty acids of *C. oakesiana* appear to be

more

effective antiherbivore compds. than the vulpinic and pinastric acids of  
*C. pinastri*.

IT **481-64-1**

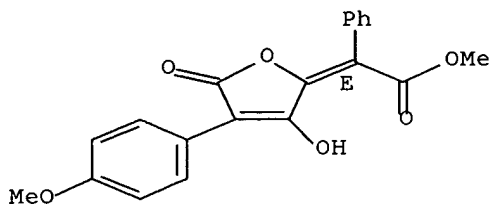
RL: BIOL (Biological study)

(of lichen, feeding by slug inhibition by)

RN 481-64-1 CAPLUS

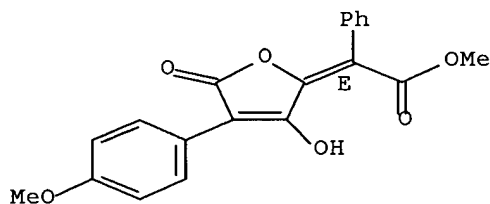
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

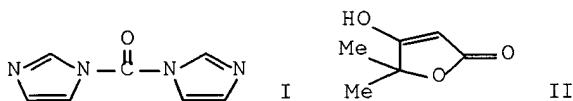


L9 ANSWER 95 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1981:477126 CAPLUS  
 DN 95:77126  
 TI The species of Chrysothrix  
 AU Laundon, J. R.  
 CS Dep. Bot., Br. Mus., London, SW7 5BD, UK  
 SO Lichenologist (1981), 13(2), 101-21  
 CODEN: LCHNB8; ISSN: 0024-2829  
 DT Journal  
 LA English  
 AB The lichen genus Chrysothrix is shown to comprise 4 species: *C. candelaris*, *C. chlorina*, *C. chrysophthalma* and *C. pavonii* (*C. noli-tangere*). The genera *Pulveraria* and *Temnospora* are placed in the synonymy of *Chrysothrix* nom. cons., and all bright yellow, leprose, sterile lichens with pulvinic acid derivs., formerly included in *Lepraria* and *Crocynia*, are referred to the genus. *C. oceanica* Is excluded; it probably belongs to *Caloplaca*. A key to and detailed accounts of the recognized species are included. There are 3 chemotypes of *C. candelaris*, 1 of which is probably of hybrid origin.  
 IT **481-64-1**  
 RL: BIOL (Biological study)  
 (in chrysothrix species, taxonomy in relation to)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA.INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 96 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1980:425866 CAPLUS  
 DN 93:25866  
 TI A facile synthesis of simple tetronic acids and pulvinones  
 AU Jerris, Paula J.; Wovkulich, Peter M.; Smith, Amos B., III  
 CS Dep. Chem., Univ. Pennsylvania, Philadelphia, PA, 19104, USA  
 SO Tetrahedron Letters (1979), (47), 4517-20  
 CODEN: TELEAY; ISSN: 0040-4039  
 DT Journal  
 LA English  
 GI



AB Condensation of dianions, derived from .alpha.-hydroxy ketones and 1,2-diketones, with 1,1'-carbonyldiimidazole (I) provides a one step prepn. of tetronic acids and pulvinones. E.g., the anion derived from Me<sub>2</sub>C(OH)COMe by treatment with (Me<sub>2</sub>CH)<sub>2</sub>NLi reacted with I (-78.degree.,

N

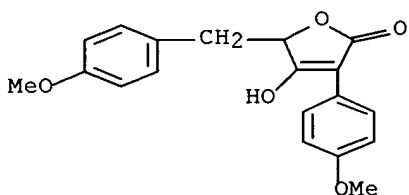
atm.) giving, on workup, 48% II.

IT **74026-72-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 74026-72-5 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methyl]-  
 (9CI) (CA INDEX NAME)

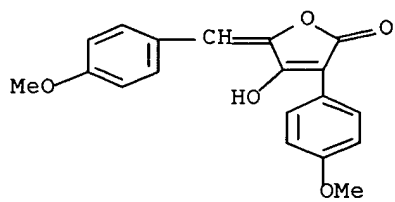


IT **49637-64-1P 74026-73-6P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of, by cyclocondensation of ketone anions with carbonyldiimidazole)

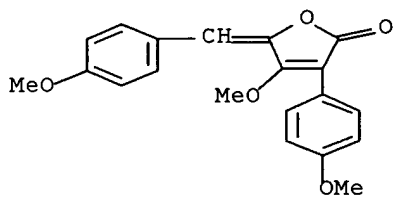
RN 49637-64-1 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methylene]- (9CI) (CA INDEX NAME)



RN 74026-73-6 CAPLUS

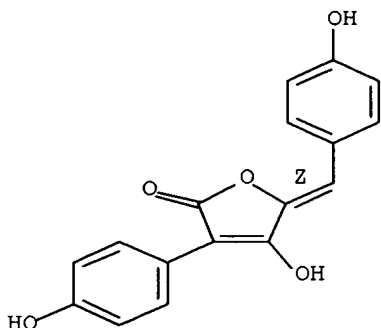
CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methylene]- (9CI) (CA INDEX NAME)





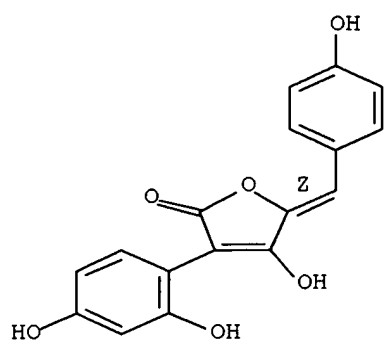
L9 ANSWER 97 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1980:90620 CAPLUS  
 DN 92:90620  
 TI Biosynthesis of aspulvinones, metabolites from *Aspergillus terreus*  
 AU Seto, Shuichi  
 CS Chem. Res. Inst. Non-Aqueous Soln., Tohoku Univ., Sendai, 980, Japan  
 SO International Congress of Pure and Applied Chemistry, [Proceedings]  
 (1979), Volume Date 1977, 26th (Vol. 4), A21-A32  
 CODEN: PCPAAI; ISSN: 0369-8661  
 DT Journal  
 LA English  
 AB Aspulvinones, derivs. of pulvinone, were isolated from *A. terreus* and  
 their biosynthesis was studied. The aspulvinone skeleton is  
 biosynthesized from either L-phenylalanine or L-tyrosine, and the  
 skeleton  
 accepts the transfer of prenyl units derived from mevalonate.  
 Dimethylallyl pyrophosphate:aspulvinone dimethylallyltransferase was  
 purified nearly to homogeneity from the fungus. This enzyme catalyzed  
 the  
 transfer of prenyl units to both of the 2 arom. nuclei of either  
 aspulvinone D or G. It had a mol. wt. of 270,000 consisting of 6  
 closely  
 similar subunits of 45,000.  
 IT **49637-60-7 55215-40-2**  
 RL: FORM (Formation, nonpreparative)  
 (formation of, by *Aspergillus terreus*, kinetics of)  
 RN 49637-60-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-  
 hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



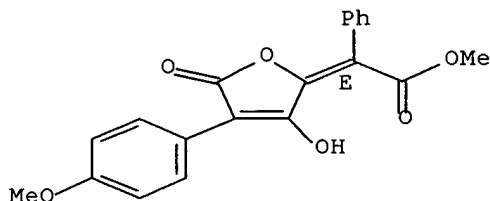
RN 55215-40-2 CAPLUS  
 CN 2(5H)-Furanone, 3-(2,4-dihydroxyphenyl)-4-hydroxy-5-[(4-  
 hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



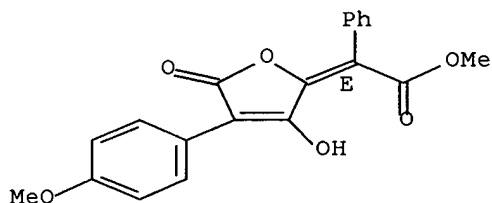
L9 ANSWER 98 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1980:90224 CAPLUS  
 DN 92:90224  
 TI Separation and identification of lichen acids of the pulvinic acid series  
 AU Chawla, H. M.; Gambhir, I.; Kathuria, L.  
 CS Res. Lab., Rajdhani Coll., New Delhi, 110015, India  
 SO HRC & CC, Journal of High Resolution Chromatography and Chromatography Communications (1979), 2(11), 673-4  
 CODEN: HCJCDB; ISSN: 0344-7138  
 DT Journal  
 LA English  
 AB The lichen acids: pulvinic acid, vulpinic acid, pinastric acid, leprapinic acid, isopinastric acid, and pulvinic acid dilactone, which occur in certain yellow varieties of lichens and are difficult to sep., were successfully sepd. and identified by thin-layer chromatog. on chlorobenzene-impregnated silica gel plates.  
 IT **481-64-1**  
 RL: ANT (Analyte); ANST (Analytical study)  
 (chromatog. of, on chlorobenzene-impregnated silica gel plates)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

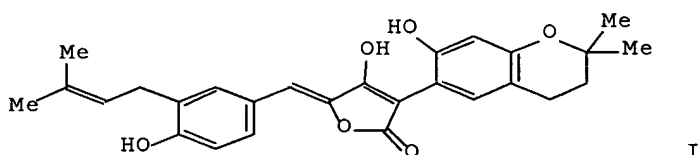


L9 ANSWER 99 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1980:37040 CAPLUS  
 DN 92:37040  
 TI Screening of aromatic secondary lichen substances by high performance liquid chromatography  
 AU Strack, Dieter; Feige, Guido Benno; Kroll, Reinhard  
 CS Bot. Inst., Univ. Koeln, Cologne, D-5000/41, Fed. Rep. Ger.  
 SO Zeitschrift fuer Naturforschung, C: Journal of Biosciences (1979), 34C(9-10), 695-8  
 CODEN: ZNCBDA; ISSN: 0341-0382  
 DT Journal  
 LA English  
 AB A simple high-performance liq. chromatog. method was developed for screening and detn. of arom. secondary lichen substances. By using a linear H2O-MeOH gradient on a reversed-phase column packing (LiChrosorb RP-8), 13 arom. lichen products were resolved within 55 min. The method was demonstrated with 8 arbitrarily selected lichens.  
 IT **481-64-1**  
 RL: ANT (Analyte); ANST (Analytical study)  
 (detection of, in lichens by high-performance liq. chromatog.)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

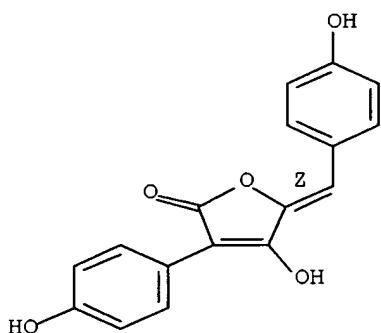


L9 ANSWER 100 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1979:507846 CAPLUS  
 DN 91:107846  
 TI Aspulvinones, a new class of natural products from *Aspergillus terreus*.  
 Reinvestigation of structures by x-ray crystallographic and  
 spectroscopic  
 analysis  
 AU Begley, Michael J.; Gedge, David R.; Knight, David W.; Pattenden, Gerald  
 CS Dep. Chem., Univ. Nottingham, Nottingham, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and  
 Bio-Organic Chemistry (1972-1999) (1979), (1), 77-83  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI

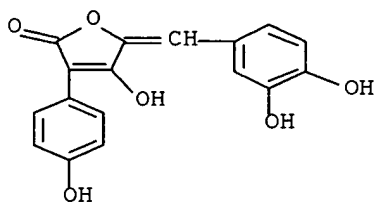


AB The structure of aspulvinone I, isolated from *A. terreus*, was detd. by  
 x-ray crystallog. This structural data led to revision of structures  
 assigned to all 'unsym.' substituted aspulvinones found in *A. terreus*.  
 IT **49637-60-7P 51282-12-3P 71126-56-2P**  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and mass spectrum of)  
 RN 49637-60-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-  
 hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



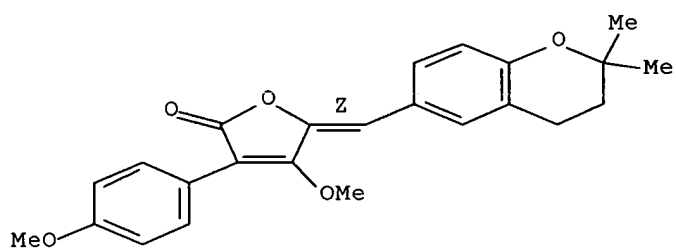
RN 51282-12-3 CAPLUS  
 CN 2(5H)-Furanone, 5-[(3,4-dihydroxyphenyl)methylene]-4-hydroxy-3-(4-  
 hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 71126-56-2 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dihydro-2,2-dimethyl-2H-1-benzopyran-6-yl)methylene]-4-methoxy-3-(4-methoxyphenyl)-, (Z)- (9CI) (CA INDEX NAME)

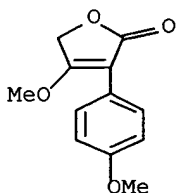
Double bond geometry as shown.



L9 ANSWER 101 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1979:507845 CAPLUS  
 DN 91:107845  
 TI Total synthesis of pulvinones, 4-benzylidene-2-phenyltetronic acid  
 pigments of fungi  
 AU Knight, David W.; Pattenden, Gerald  
 CS Dep. Chem., Univ. Nottingham, Nottingham, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and  
 Bio-Organic Chemistry (1972-1999) (1979), (1), 70-6  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

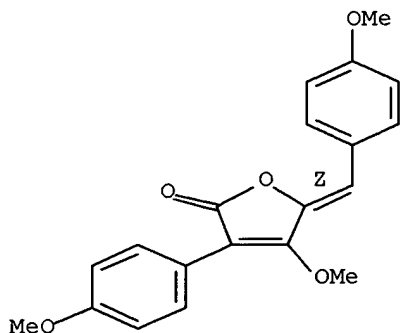
AB Regiospecific  $\text{LiAlH}_4$  redn. of maleic anhydride derivs. I and II ( $\text{RR1} = \text{O}$ ,  
 $\text{R2} = \text{Me}$ ) gave tetronic acids I and II ( $\text{R} = \text{R1} = \text{H}$ ,  $\text{R2} = \text{Me}$ ), resp.  
 Condensation of 3,4- and 2,4-( $\text{MeO}$ ) $2\text{C}_6\text{H}_3\text{CHO}$  with I ( $\text{R} = \text{R1} = \text{H}$ ,  $\text{R2} = \text{Me}$ )  
 gave pulvinones III ( $\text{R} = \text{OMe}$ ,  $\text{R1} = \text{H}$ ;  $\text{R} = \text{H}$ ,  $\text{R1} = \text{OMe}$ , resp.), the  
 former  
 being identical to that obtained from *Suillus grevillei*, but the latter  
 was not identical with that reported previously by N. Ojima, S.  
 Takenaka,  
 and S. Seto (1975) as having this constitution and isolated from  
*Aspergillus terreus*. Unambiguous syntheses of prenylated pulvinones I  
 ( $\text{RR1} = \text{Q}$ ,  $\text{R2} = \text{Me}$ ) and II ( $\text{RR1} = \text{Z}$ ,  $\text{R2} = \text{Me}$ ) indicate the biosynthesis  
 of  
 II ( $\text{RR1} = \text{Q}$ ,  $\text{R1} = \text{H}$ ) to proceed by selective monoprenylation of I ( $\text{RR1} =$   
 $\text{CHC}_6\text{H}_4\text{OH-p}$ ,  $\text{R1} = \text{H}$ ) and by selective chromanation of IV.  
 IT **58368-11-9**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (condensation reaction of, with methoxybenzaldehyde)  
 RN 58368-11-9 CAPLUS  
 CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



IT **71126-55-1P**  
 RL: PREP (Preparation)  
 (from *Aspergillus terreus*, structure of)  
 RN 71126-55-1 CAPLUS  
 IT **49637-61-8P 51282-21-4P 55215-41-3P**  
**61370-78-3P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 49637-61-8 CAPLUS

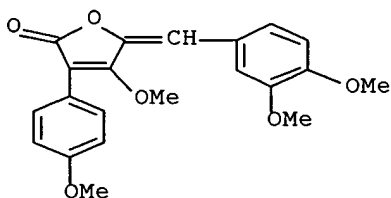
CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methylene]-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



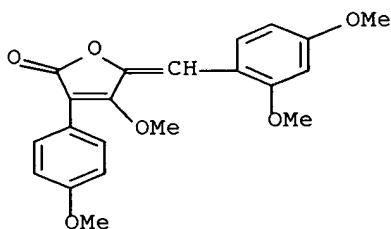
RN 51282-21-4 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dimethoxyphenyl)methylene]-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



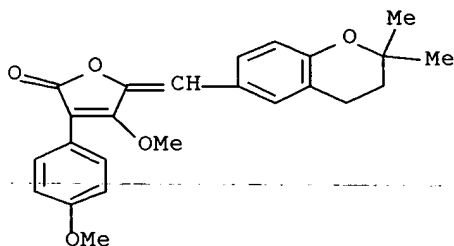
RN 55215-41-3 CAPLUS

CN 2(5H)-Furanone, 5-[(2,4-dimethoxyphenyl)methylene]-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 61370-78-3 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dihydro-2,2-dimethyl-2H-1-benzopyran-6-yl)methylene]-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



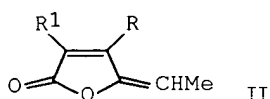
IT 71126-54-0

RL: PROC (Process) (structure revision of)

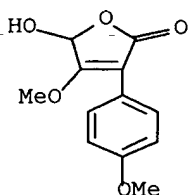
RN 71126-54-0 CAPLUS



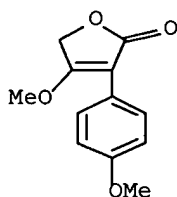
L9 ANSWER 102 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1979:507844 CAPLUS  
 DN 91:107844  
 TI Synthetic approaches towards 4-ylidenebutenolides and 4-ylidenetetrone  
 acids. Regioselective nucleophilic additions to unsymmetrically  
 substituted maleic anhydrides  
 AU Knight, David W.; Pattenden, Gerald  
 CS Dep. Chem., Univ. Nottingham, Nottingham, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and  
 Bio-Organic Chemistry (1972-1999) (1979), (1), 62-9  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI



AB Metal hydride redn. of 2-methylmaleic anhydride (I) gave a mixt. of  
 4-hydroxybutenolides and butenolides corresponding to .apprx.88%  
 regiospecific attack at the more hindered carbonyl. Similar redns. of  
 other methoxy-substituted anhydrides were completely regiospecific  
 involving attack at the C-1 position. Condensation of MeO<sub>2</sub>CCH:PPh<sub>3</sub> with  
 I  
 gave butenolides resulting from attack at C-4 as the major products;  
 2-methoxy-3-methyl- and -3-phenylmaleic anhydride with RO<sub>2</sub>CCH:PPh<sub>3</sub> (R =  
 Me, Et) gave ylidenetetrone acids by attack at C-1. Similarly, addn.  
 of  
 EtMgBr to I, followed by dehydration of the intermediate carbinol, gave  
 a  
 3:2 mixt. of Z-ylidenebutenolides II (R = Me, R1 = H; R = H, R1 = Me,  
 resp.), whereas the corresponding reaction with 2-methoxy-3-phenylmaleic  
 anhydride gave only II (R = OMe, R1 = Ph).  
 IT **58368-10-8P 58368-11-9P 71126-46-0P**  
**71126-47-1P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 58368-10-8 CAPLUS  
 CN 2(5H)-Furanone, 5-hydroxy-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA  
 INDEX  
 NAME)

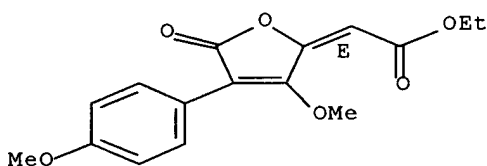


RN 58368-11-9 CAPLUS  
CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



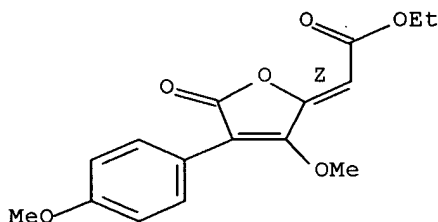
RN 71126-46-0 CAPLUS  
CN Acetic acid, [3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, ethyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

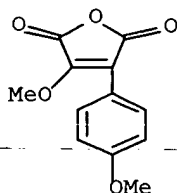


RN 71126-47-1 CAPLUS  
CN Acetic acid, [3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, ethyl ester, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

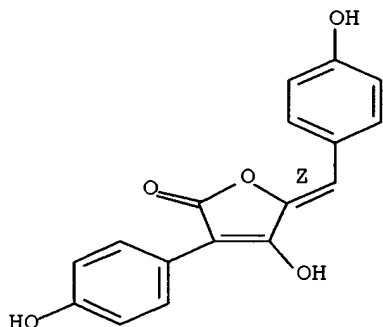


IT **49829-96-1P**  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(prepn., redn., and regioselective addn. reactions of)  
RN 49829-96-1 CAPLUS  
CN 2,5-Furandione, 3-methoxy-4-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



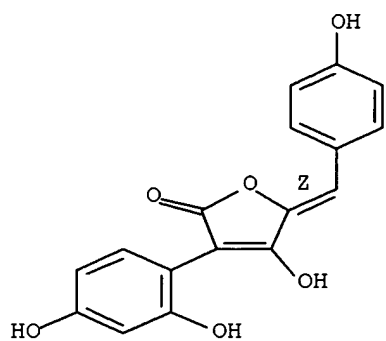
L9 ANSWER 104 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1979:435392 CAPLUS  
 DN 91:35392  
 TI Biosynthesis of aspulvinones. Aromatic hydroxylation meta to a  
 preexisting hydroxyl group  
 AU Kobayashi, Masaki; Ojima, Nobutoshi; Ogura, Kyoze; Seto, Shuichi  
 CS Chem. Res. Inst. Non-Aqueous Solutions, Tohoku Univ., Sendai, 980, Japan  
 SO Chemistry Letters (1979), (5), 579-82  
 CODEN: CMLTAG; ISSN: 0366-7022  
 DT Journal  
 LA English  
 AB Aspulvinones are assumed to be synthesized by way of the shikimate  
 pathway, but they are unique because some aspulvinones have a resorcinol  
 moiety which is characteristic of the polyketide pathway rather than the  
 shikimate pathway. If they are derived from phenylalanine, 2 hydroxyl  
 groups should be introduced to the arom. ring in meta relation.  
 Shikimic  
 acid, phenylalanine, and tyrosine were incorporated into aspulvinones in  
 Aspergillus terreus. The hydroxylation at C-4 involved the NIH shift,  
 whereas C-2 was hydroxylated with loss of 3H from that position.  
 IT **49637-60-7 55215-40-2**  
 RL: FORM (Formation, nonpreparative)  
 (formation of, by Aspergillus terreus, pathway for)  
 RN 49637-60-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-  
 hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

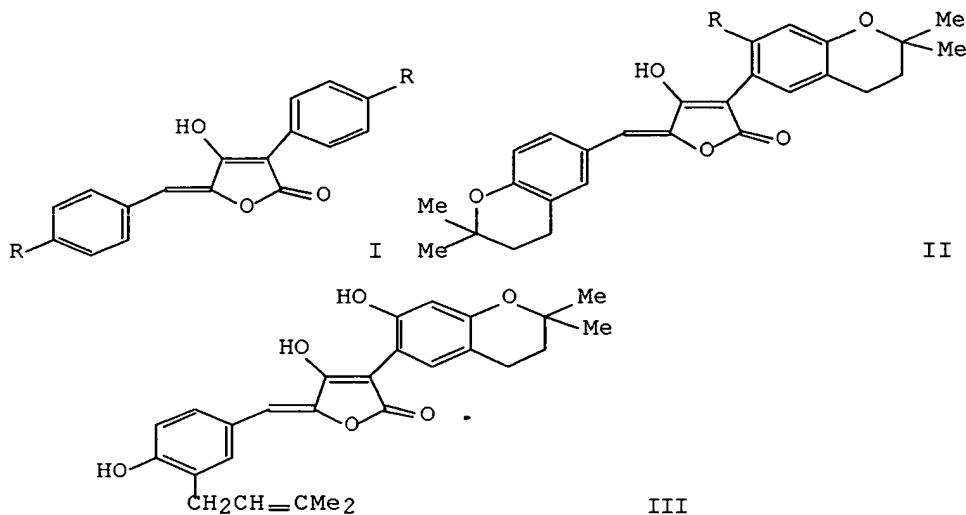


RN 55215-40-2 CAPLUS  
 CN 2(5H)-Furanone, 3-(2,4-dihydroxyphenyl)-4-hydroxy-5-[(4-  
 hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 105 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1979:186730 CAPLUS  
 DN 90:186730  
 TI Carbon-13 NMR spectra of aspulvinones  
 AU Sugiyama, Hiroshi; Ojima, Nobutoshi; Kobayashi, Masaki; Senda, Yasuhisa;  
 Ishiyama, Junichi; Seto, Shuichi  
 CS Chem. Res. Inst. Non-Aqueous Solutions, Tohoku Univ., Sendai, Japan  
 SO Agricultural and Biological Chemistry (1979), 43(2), 403-4  
 CODEN: ABCHA6; ISSN: 0002-1369  
 DT Journal  
 LA English  
 GI



AB The <sup>13</sup>C NMR of pulvinone (I; R = OH), aspulvinone E (I; R = OH), aspulvinone A (II; R = H), aspulvinone (II; R = OH), and aspulvinone D were used to assign their structures.

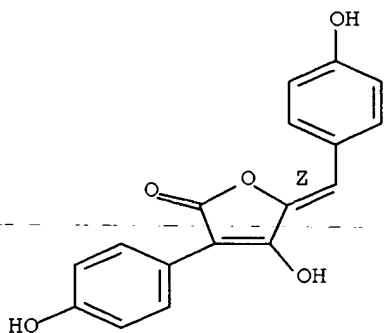
IT 49637-60-7

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (carbon-13 NMR and structure of)

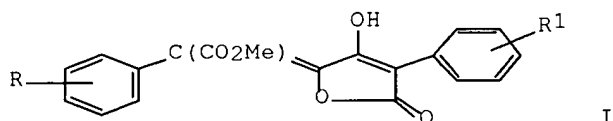
RN 49637-60-7 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

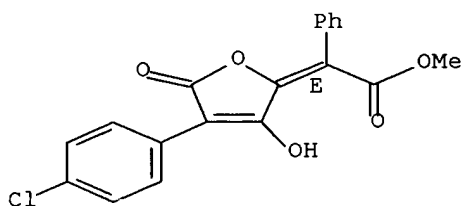


L9 ANSWER 106 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1979:121308 CAPLUS  
 DN 90:121308  
 TI Regiospecific synthesis of substituted vulpinic acids  
 AU Weinstock, Joseph; Blank, Judith E.; Oh, Hye-Ja; Sutton, Blaine M.  
 CS Smith Kline and French Lab., Philadelphia, PA, USA  
 SO Journal of Organic Chemistry (1979), 44(5), 673-6  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DT Journal  
 LA English  
 GI



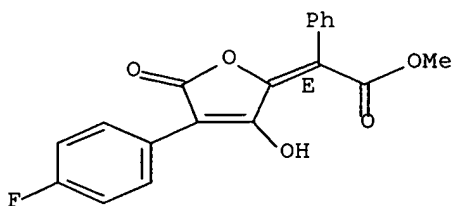
AB A regiospecific synthesis of vulpinic acid analogs I [R = H, 4-F, 4-Cl, 3-MeO, 4-R2O (R2 = Me, Et, Ph, PhCH2); R1 = H, 4-F, 4-Cl, 4-NO2, 3-CF3, etc.], substituted differently in each of the rings, was developed. Treatment of the appropriate di-Me 2-phenyl-2-oxalylacetate with the appropriate phenylacetyl chloride in the presence of triethylamine gave the enol esters RC6H4C(CO2Me):C(CO2Me)O2CCH2C6H4R1. Excess Et3N catalyzed cyclization to the desired substituted vulpinic acid. This approach was also successful in certain instances when one of the phenyls was replaced by another substituent.  
 IT **37542-22-6P 68781-54-4P 68781-55-5P**  
**68781-61-3P 68781-62-4P 68781-63-5P**  
**68781-64-6P 68781-66-8P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 37542-22-6 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 68781-54-4 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(4-fluorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

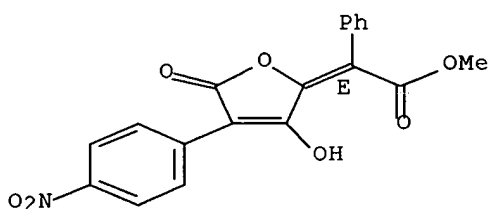
Double bond geometry as shown.



RN 68781-55-5 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-nitrophenyl)-5-oxo-2(5H)-furanlydene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

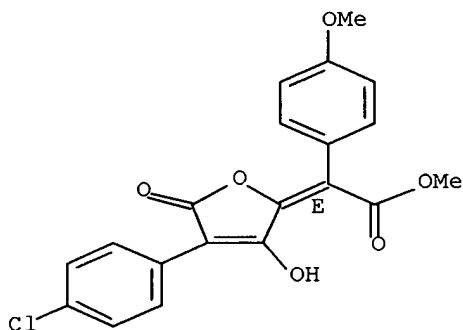
Double bond geometry as shown.



RN 68781-61-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]-4-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

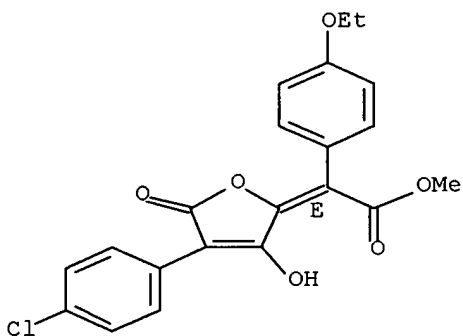
Double bond geometry as shown.



RN 68781-62-4 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]-4-ethoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

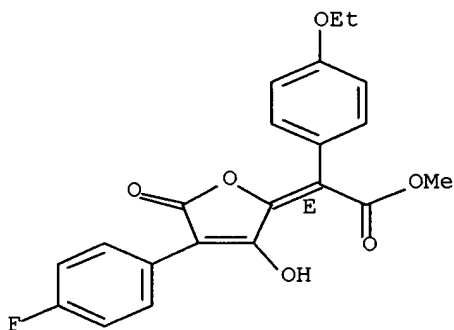
Double bond geometry as shown.



RN 68781-63-5 CAPLUS

CN Benzeneacetic acid, 4-ethoxy-.alpha.-[4-(4-fluorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

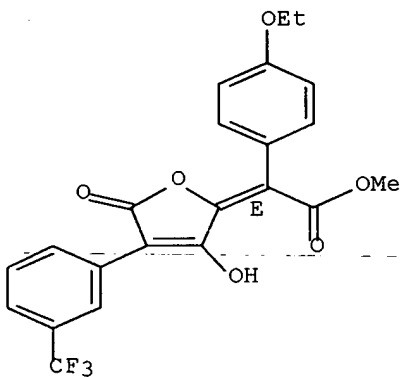
Double bond geometry as shown.



RN 68781-64-6 CAPLUS

CN Benzeneacetic acid, 4-ethoxy-.alpha.-[3-hydroxy-5-oxo-4-[3-(trifluoromethyl)phenyl]-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

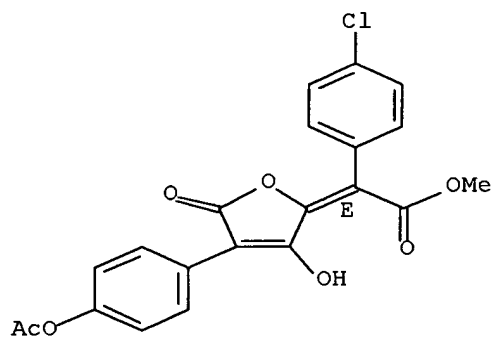


RN 68781-66-8 CAPLUS



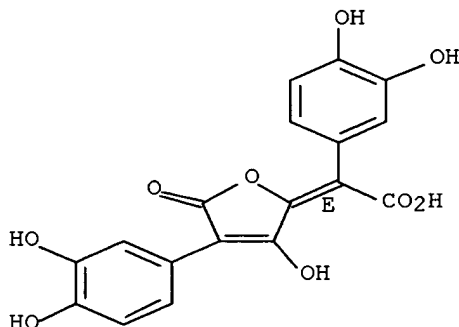
CN Benzeneacetic acid, .alpha.-[4-[4-(acetyloxy)phenyl]-3-hydroxy-5-oxo-  
2(5H)-  
furanylidene]-4-chloro-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

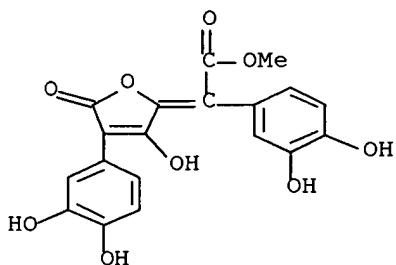


L9 ANSWER 107 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1979:118067 CAPLUS  
 DN 90:118067  
 TI Fungal pigments. XXXV. 3-O-methylvariegatic acid and related pulvinic acid derivatives from cultures of *Hygrophoropsis aurantiaca* (Boletales)  
 AU Besl, Helmut; Bresinsky, Andreas; Kopanski, Lothar; Steglich, Wolfgang  
 CS Fachber. Biol., Univ. Regensburg, Regensburg, Fed. Rep. Ger.  
 SO Zeitschrift fuer Naturforschung, C: Journal of Biosciences (1978), 33C(11-12), 820-5  
 CODEN: ZNCBDA; ISSN: 0341-0382  
 DT Journal  
 LA German  
 AB From cultures of *H. aurantiaca*, in addn. to variegatic acid, Me variegatic, and variegatorubin, 3 new derivs. of pulvinic acid were isolated. They were identified as 3-O-methylvariegatic acid, its Me ester, and 3-O-methylvariegatorubin by spectroscopy and comparison with synthetic samples.  
 IT 20988-30-1 20988-31-2 27286-59-5  
 69285-86-5 69475-29-2 69484-94-2  
 RL: BIOL (Biological study)  
 (from *Hygrophoropsis aurantiaca*)  
 RN 20988-30-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



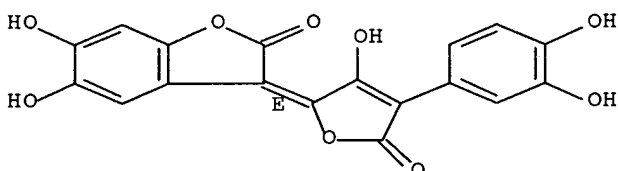
RN 20988-31-2 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy-, methyl ester (9CI) (CA INDEX NAME)



RN 27286-59-5 CAPLUS

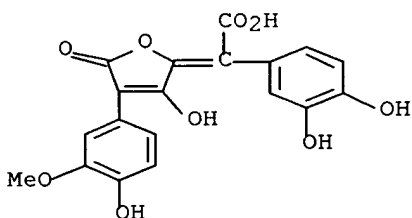
CN 2(3H)-Benzofuranone, 3-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-5,6-dihydroxy-, (3E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 69285-86-5 CAPLUS

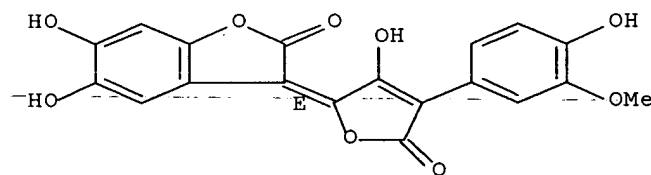
CN Benzeneacetic acid, 3,4-dihydroxy-.alpha.-[3-hydroxy-4-(4-hydroxy-3-methoxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



RN 69475-29-2 CAPLUS

CN 2(3H)-Benzofuranone, 5,6-dihydroxy-3-[3-hydroxy-4-(4-hydroxy-3-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, (E)- (9CI) (CA INDEX NAME)

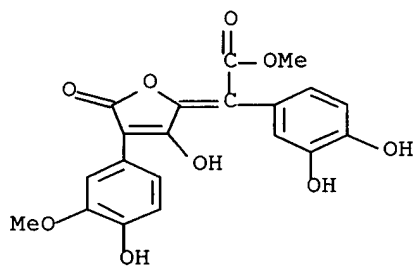
Double bond geometry as shown.



RN 69484-94-2 CAPLUS

CN Benzeneacetic acid, 3,4-dihydroxy-.alpha.-[3-hydroxy-4-(4-hydroxy-3-

methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



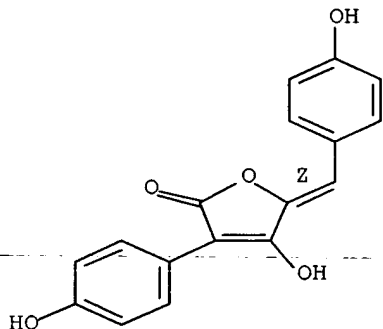
L9 ANSWER 108 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1978:502548 CAPLUS  
 DN 89:102548  
 TI Purification and characterization of dimethylallyl  
 pyrophosphate:aspulvinone dimethylallyltransferase from *Aspergillus  
 terreus*  
 AU Takahashi, Ikuko; Ojima, Nobutoshi; Ogura, Kyoze; Seto, Shuichi  
 CS Chem. Res. Inst. Non-Aqueous Solutions, Tohoku Univ., Sendai, Japan  
 SO Biochemistry (1978), 17(13), 2696-702  
 CODEN: BICHAW; ISSN: 0006-2960  
 DT Journal  
 LA English  
 AB Dimethylallyl pyrophosphate-aspulvinone dimethylallyltransferase (I),  
 the

prenylation enzyme for the biosynthesis of aspulvinone pigments, was  
 purified from mycelia of *A. terreus*. I catalyzed the transfer of the  
 dimethylallyl moiety from dimethylallyl pyrophosphate to either of the 2  
 arom. rings of aspulvinone E to give the mono- and diprenylated derivs.  
 which were identified with the metabolites aspulvinone I and aspulvinone  
 H, resp. Aspulvinone G, another fundamental metabolite of this series,  
 also acted as substrate to afford the corresponding diprenylated deriv.,  
 which is assumed to be a precursor for aspulvinone C, D, and F. The  
 mol.

wt. of I was estd. to be 240,000-270,000 by gel filtration. Since the  
 subunit mol. wt. detd. by Na dodecyl sulfate-polyacrylamide disc gel  
 electrophoresis was 45,000, native I appears to be a hexomeric protein  
 composed of identical mol. wt. subunits. The apparent  $K_m$  values for  
 aspulvinone E, aspulvinone G, and dimethylallyl pyrophosphate were 13.7,  
 7.7, and 40.0  $\mu\text{M}$ , resp. I showed the max. activity at pH 7.0, and no  
 metal ion was necessary for the activation. SH-group-blocking agents or  
 mercaptoethanol had no effect. Bromophenol blue bound specifically to I  
 and strongly inhibited the enzyme activity.

IT **49637-60-7 55215-40-2**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with aspulvinone dimethylallyltransferase, kinetics of)  
 RN 49637-60-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-  
 hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

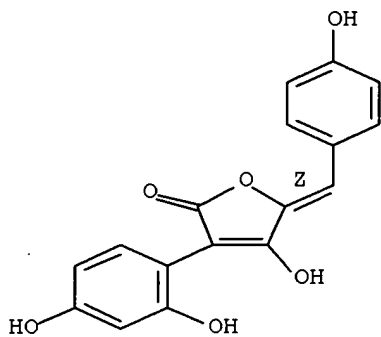
Double bond geometry as shown.



RN 55215-40-2 CAPLUS  
 CN 2(5H)-Furanone, 3-(2,4-dihydroxyphenyl)-4-hydroxy-5-[(4-

hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 109 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1978:117773 CAPLUS  
 DN 88:117773  
 TI Presence and systematic evaluation of pigments in higher fungi. 2  
 AU Besl, H.; Bresinsky, A.  
 CS Fed. Rep. Ger.  
 SO Zeitschrift fuer Pilzkunde (1977), 43(2), 311-22  
 CODEN: ZEPIBV; ISSN: 0044-3352  
 DT Journal  
 LA German  
 AB Pigment compn. and chemotaxonomy was studied for poriales, agaricales,  
 and  
 boletales, based on exptl. and literature data. The Tricholoma species  
 was divided into 4 types, based on the pigment content. Endocrocin,  
 asperflavin, and phlegmacin were identified in Leucopaxillus tricolor.  
 New pigments were identified in boletales, such as xerocomic acid,  
 variegatic acid, and variegatorubin in Suillus collinitus and grevillin

D  
 in S. leptopus. Gyroporin and xerocomorubin were identified in Leccinum  
 scabrum. Xerocomic acid was identified in the fruit body of Paxillus  
 atrotomentosus. Seven pigments were sepd. from Rhizopogon luteolus, and  
 partly identified.

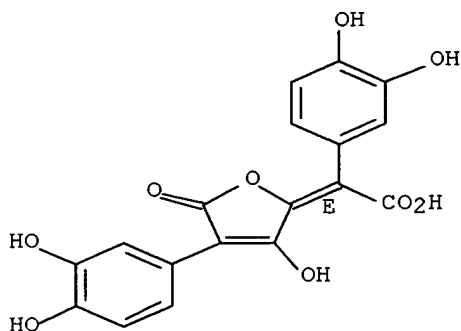
IT 20988-30-1 25287-88-1 27286-59-5  
 50422-97-4

RL: BIOL (Biological study)  
 (of higher fungi, taxonomy in relation to)

RN 20988-30-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-  
 2(5H)-  
 furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

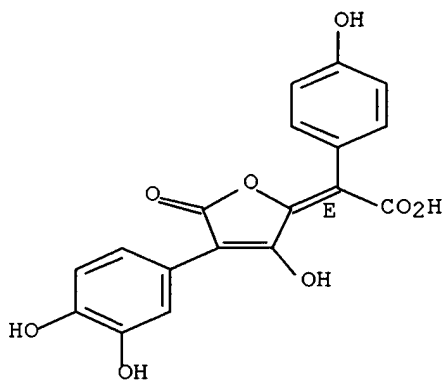


RN 25287-88-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-  
 2(5H)-

furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

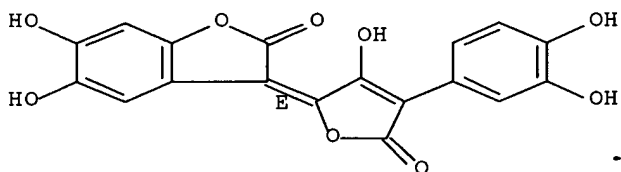
Double bond geometry as shown.



RN 27286-59-5 CAPLUS

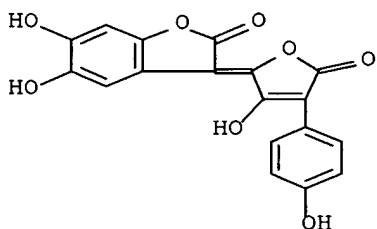
CN 2(3H)-Benzofuranone, 3-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-5,6-dihydroxy-, (3E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



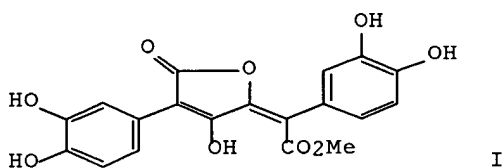
RN 50422-97-4 CAPLUS

CN 2(3H)-Benzofuranone, 5,6-dihydroxy-3-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)

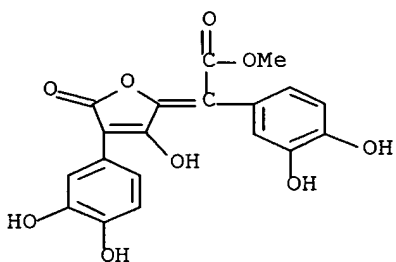




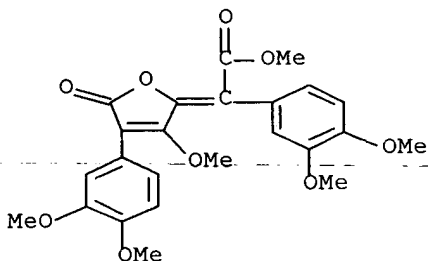
L9 ANSWER 110 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1978:101638 CAPLUS  
 DN 88:101638  
 TI Constituents of the higher fungi. Part XVII. Methyl variegatate from  
 the fungus *Hygrophoropsis aurantiaca* (Wulfen ex Fr.)  
 AU Edwards, Raymond L.  
 CS Sch. Chem., Univ. Bradford, Bradford, UK  
 SO Journal of Chemical Research, Synopses (1977), (11), 276  
 CODEN: JRPSDC; ISSN: 0308-2342  
 DT Journal  
 LA English  
 GI



AB Extn. of the fungus *H. aurantiaca* with cold EtOH gave, after evapn. and  
 purifn. of the resulting residue by column chromatog., Me variegatate  
 (I) and its penta-Me ether as the major and minor pigments, resp.  
 IT **20988-31-2 20988-32-3**  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
 BIOL (Biological study); OCCU (Occurrence)  
 (of *Hygrophoropsis aurantiaca*)  
 RN 20988-31-2 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-  
 2(5H)-furanlydene]-3,4-dihydroxy-, methyl ester (9CI) (CA INDEX NAME)



RN 20988-32-3 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-methoxy-5-oxo-  
 2(5H)-furanlydene]-3,4-dimethoxy-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 111 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1977:548745 CAPLUS

DN 87:148745

TI The role of growth regulators released by fungi in pine mycorrhizae

AU Tomaszewski, M.; Wojciechowska, B.

CS Inst. Dendrol., Pol. Acad. Sci., Kornik, Pol.

SO Plant Growth Subst., Proc. Int. Conf., 8th (1974), Meeting Date 1973,  
217-27 Publisher: Hirokawa Publ. Co., Inc., Tokyo, Japan.

CODEN: 36JIAI

DT Conference

LA English

AB Mycelial cultures of mycorrhiza-forming fungi were grown on a synthetic nutrient medium with glucose and maltose as sole C and  $\text{NH}_4\text{NO}_3$  as sole N source. IAA biosynthesis was positively correlated with the output of polyphenolic pigments (e.g., boviquinones and variegatic acid) in

Suillus

species. A relatively low N level increased both polyphenol and auxin contents whereas a high N supply decreased the synthesis of both substances without a decrease in the yield of mycelium. The

polyphenolic

pigments acted as auxin protectors both in mycelial cultures and on pine root surfaces. There was a rapid destruction of IAA supplied to the

pine

root, esp. when the pine seedlings were grown at a reduced light intensity, which coincided with a decrease in the leucocyanidin content

in

the root. The mycorrhizal fungi did not produce cell wall degrading enzymes. However, high auxin doses induced hydrolase activity of cell wall materials in pine root, which may facilitate the penetration of the lower symbiont into the cortex cells of the higher plant.

IT 20988-30-1

RL: FORM (Formation, nonpreparative)

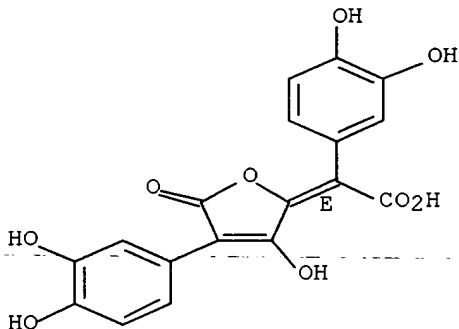
(formation of, in Suillus mycorrhiza, growth regulators and pine symbiosis in relation to)

RN 20988-30-1 CAPLUS

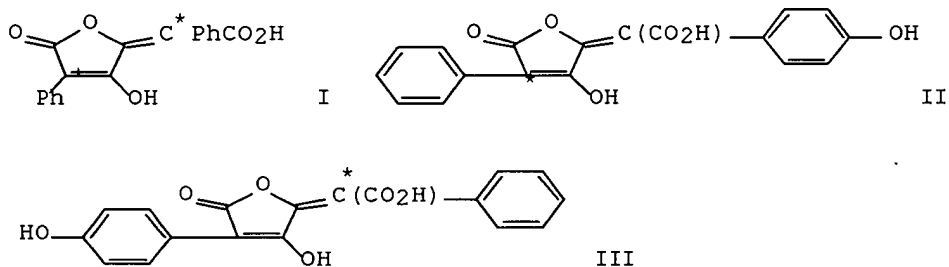
CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-

furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

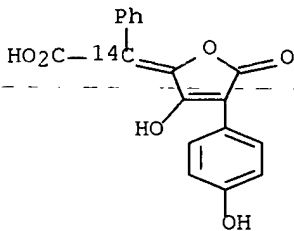
Double bond geometry as shown.



L9 ANSWER 112 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1977:171151 CAPLUS  
 DN 86:171151  
 TI Synthesis of pulvinic acid-[14C], 4-hydroxypulvinic acid-[14C] and 4'-hydroxypulvinic acid-[14C]  
 AU Noppel, Hans E.; Schweer, Karl H.; Von Massow, Friedrich  
 CS Inst. Radiochem., Ges. Kernforsch. m.b.H., Karlsruhe, Fed. Rep. Ger.  
 SO Journal of Labelled Compounds and Radiopharmaceuticals (1976), 12(1), 79-96  
 CODEN: JLCRD4; ISSN: 0362-4803  
 DT Journal  
 LA German  
 GI

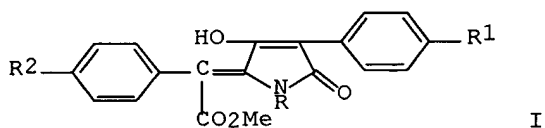


AB Condensation of  $\text{Ph}_4\text{CH}_2\text{CN}$  with  $(\text{CO}_2\text{Et})_2$  gave 87.2%  $\text{Ph}_4\text{CH}(\text{CN})\text{COCO}_2\text{Et}$ , which was condensed with  $\text{PhCH}_2\text{CN}$  to give 66.5%  $\text{Ph}_4\text{CH}(\text{CN})\text{COCOCHPhCN}$ ; this was hydrolyzed by  $\text{HI-AcOH}$  and cyclocondensed by  $\text{Ac}_2\text{O}$  to give 34.9% labeled pulvinic acid lactone, which was hydrolyzed to give 70.9% labeled pulvinic acid (I;  $^{14}\text{C}$ -labeling distributed between carbons marked with \*). When 4-MeOC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CN was used in the 2nd step, a mixt. of the 4- and 4'-HO derivs. (II and III, resp.; labeled C marked with \*) were obtained.  
 IT **62597-82-4P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 62597-82-4 CAPLUS  
 CN Benzeneacetic-.alpha.- $^{14}\text{C}$  acid, .alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]- (9CI) (CA INDEX NAME)

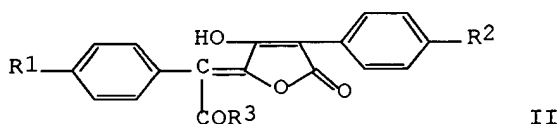


L9 ANSWER 113 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1977:55276 CAPLUS  
 DN 86:55276  
 TI Compositions comprising tetramic acid analogs of pulvinic acid for combating arthritis  
 IN Weinstock, Joseph  
 PA Smithkline Corp., USA  
 SO U.S., 12 pp. Division of U.S. 3,931,207.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

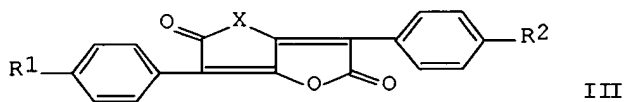
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3984559	A	19761005	US 1975-623226	19751017
	US 3931207	A	19760106	US 1973-424581	19731214
PRAI	US 1973-424581		19731214		
GI					



I



II



III

AB Tetramic acid derivs. I (R = 2-thiazolyl, 2-pyridyl, 5-chloro-2-pyridyl, 3-pyridyl, R1 = R2 = H; R = 2-thiazolyl, R1 = R2 = Cl; R = R2 = H, R1 = Me) were prepd. by treating 4-R1C6H4CH2CN with (EtO2C)2, treating 4-R1C6H4CH(CN)COCO2Et with 4-R2C6H4CH2CN, cyclizing 4-R1C6H4CH(CN)COCOCH(CN)C6H4R2-4 with acid, cyclizing II (R3 = OH) with Ac2O, treating III (X = O) with RNH2, cyclizing II (R3 = NHR), and methanolysis of III (X = NR).

IT **55506-31-5P**

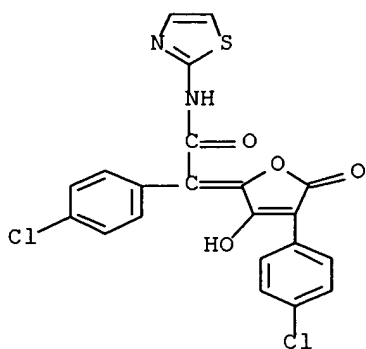
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)  
 (prepn. and cyclization of)

RN 55506-31-5 CAPLUS

-CN -Benzeneacetamide, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-  
 2(5H)-furanlydene]-N-2-thiazolyl- (9CI) (CA INDEX NAME)

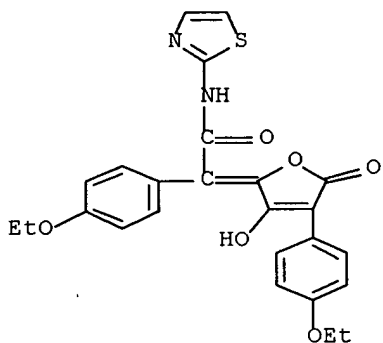


IT **55506-32-6P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 55506-32-6 CAPLUS

CN Benzeneacetamide, 4-ethoxy-.alpha.-[4-(4-ethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]-N-2-thiazolyl- (9CI) (CA INDEX NAME)



L9 ANSWER 115 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1977:13621 CAPLUS  
 DN 86:13621  
 TI Specificities of enzymatic prenylation and chromanation in the  
 biosynthesis of Aspulvinone pigments in *Aspergillus terreus*  
 AU Knight, David W.; Pattenden, Gerald  
 CS Chem. Dep., Univ. Nottingham, Nottingham, UK  
 SO Journal of the Chemical Society, Chemical Communications (1976), (16),  
 635-7  
 CODEN: JCCCAT; ISSN: 0022-4936  
 DT Journal  
 LA English  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The prepn. of the unsym. aspulvinones I and II (R = Me) showed that the  
 initially formed prenylated metabolite in the formation of aspulvinone  
 (III; R = H) in *A. terreus* is IV, and that the choman II (R = H) is the  
 immediate precursor of III (R = H).

IT **61370-80-7**

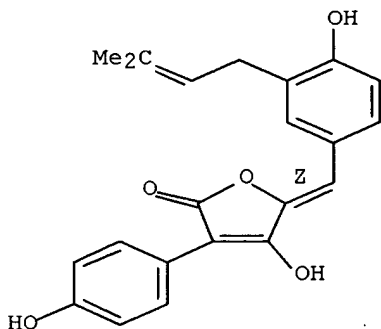
RL: BIOL (Biological study)

(intermediate, in formation of aspulvinone in *Aspergillus terreus*)

RN 61370-80-7. CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-5-[[4-hydroxy-3-(3-methyl-2-  
 butenyl)phenyl]methylene]-3-(4-hydroxyphenyl)-, (5Z)- (9CI) (CA INDEX  
 NAME)

Double bond geometry as shown.

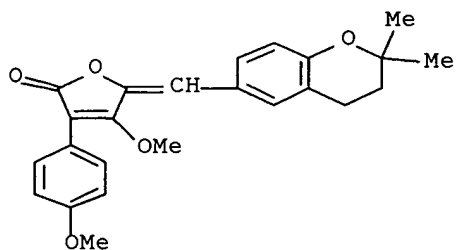


IT **61370-78-3P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 61370-78-3 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dihydro-2,2-dimethyl-2H-1-benzopyran-6-  
 yl)methylene]-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

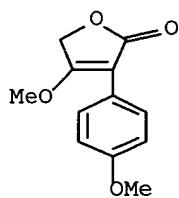


IT **58368-11-9**

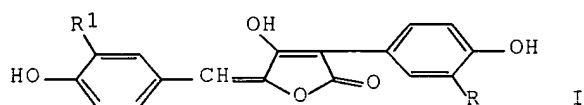
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with chroman aldehyde)

RN 58368-11-9 CAPLUS

CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

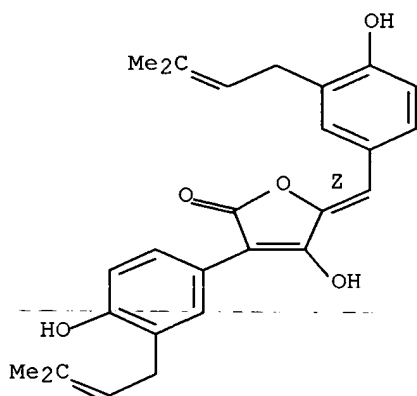


L9 ANSWER 116 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1976:462881 CAPLUS  
 DN 85:62881  
 TI New metabolites from *Aspergillus terreus* related to the biosynthesis of aspulvinones  
 AU Ojima, Nobutoshi; Takahashi, Ikuko; Ogura, Kyozo; Seto, Shuichi  
 CS Chem. Res. Inst. Nonaqueous Solutions, Tohoku Univ., Sendai, Japan  
 SO Tetrahedron Letters (1976), (13), 1013-14  
 CODEN: TELEAY; ISSN: 0040-4039  
 DT Journal  
 LA English  
 GI



AB The structures of aspulvinone H (I; R = R1 = CH2CH:CM<sub>2</sub>) and aspulvinone I  
 I (I; R = CH2CH:CM<sub>2</sub>, R1 = H or R = H, R1 = CH2CH:CM<sub>2</sub>), isolated from *A. terreus*, were detd. from spectral data. Aspulvinone H was identical to the  
 the compd. previously prepd. (O., T., and S., 1973) from dihydroxypulvinone (I; R = R1 = H) by reaction with 3,3-dimethylallylpyrophosphate.  
 IT **57744-69-1P 60238-12-2P**  
 RL: PREP (Preparation)  
 (from *Aspergillus terreus*, mol. structure of)  
 RN 57744-69-1 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-[4-hydroxy-3-(3-methyl-2-butenyl)phenyl]-5-[[4-hydroxy-3-(3-methyl-2-butenyl)phenyl]methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



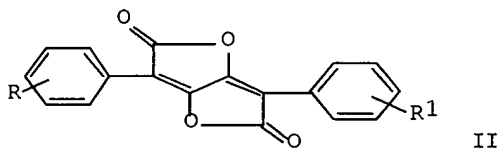
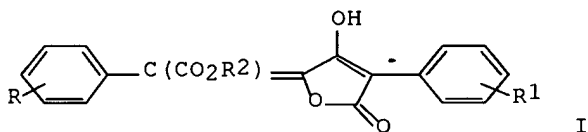
RN 60238-12-2 CAPLUS



L9 ANSWER 117 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1976:446362 CAPLUS  
 DN 85:46362  
 TI Ester derivatives of pulvinic acid  
 IN Sutton, Blaine M.; Walz, Donald T.; Wilson, James W.  
 PA Smithkline Corp., USA  
 SO U.S., 7 pp. Division of U.S. 3,826,839.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3944571	A	19760316	US 1974-467367	19740506
	US 3826839	A	19740730	US 1971-191051	19711020
	CA 988851	A2	19760511	CA 1974-196994	19740408
PRAI	US 1970-94974		19701203		
	US 1971-191051		19711020		
	CA 1971-127883		19711117		

GI



AB About 20 pulvinates I (R, R1 = H, p-Cl, m-Cl, p-MeO, p-F, m-MeO, p-EtO, etc.; R2 = Me, Et) were prepd. by treating RC6H4CN with EtO2CCO2Et and condensation of RC6H4CH(CN)COCO2Et with R1C6H4CN to give RC6H4CH(CN)COCOCH(CN)C6H4R1, which was cyclized and the lactone II hydrolyzed. At 10-50 mg/kg I inhibited adjuvant induced arthritis in rats.

IT **38747-07-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

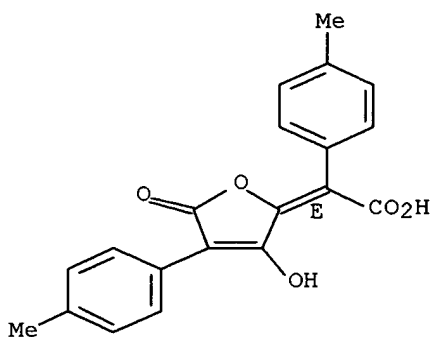
(Reactant or reagent)

(prepn. and cyclization and hydrolysis of)

RN 38747-07-8 CAPLUS

- CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furan-2-ylidene]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT **38747-10-3P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

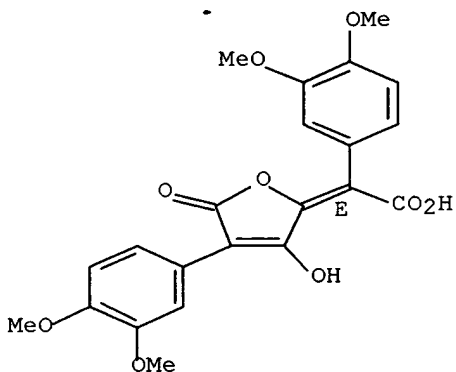
(prepn. and cyclization of)

RN 38747-10-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-

furanylidene]-3,4-dimethoxy-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT **38746-76-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

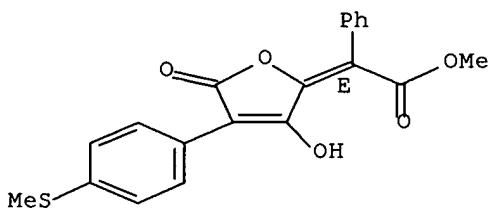
(Reactant or reagent)

(prepn. and oxidn. of)

RN 38746-76-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-[4-(methylthio)phenyl]-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



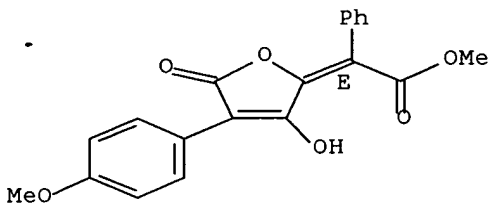
IT 481-64-1P 22628-21-3P 27394-71-4P  
 32883-73-1P 32883-77-5P 37542-21-5P  
 37542-22-6P 37542-24-8P 37542-25-9P  
 38746-78-0P 38746-79-1P 38746-80-4P  
 38746-82-6P 38746-86-0P 38746-88-2P  
 38746-89-3P 38746-90-6P 38746-91-7P  
 38747-14-7P 59801-32-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
 furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

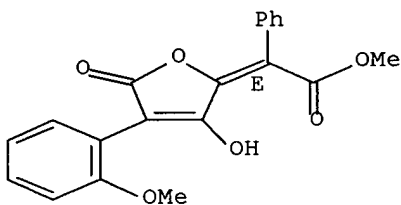
Double bond geometry as shown.



RN 22628-21-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(2-methoxyphenyl)-5-oxo-2(5H)-  
 furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

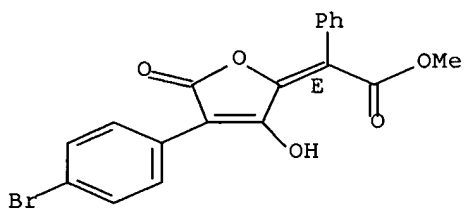
Double bond geometry as shown.



RN 27394-71-4 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-bromophenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

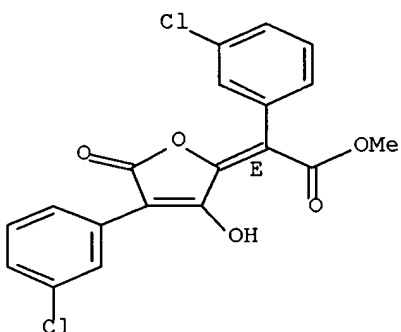
Double bond geometry as shown.



RN 32883-73-1 CAPLUS

CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

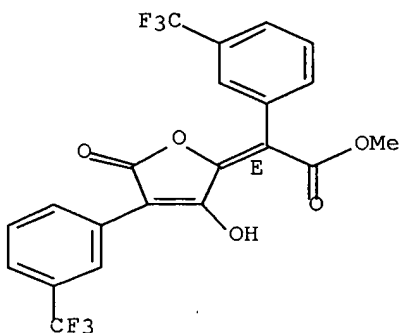
Double bond geometry as shown.



RN 32883-77-5 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-[3-(trifluoromethyl)phenyl]-2(5H)-furanylidene]-3-(trifluoromethyl)-, methyl ester, (E)- (9CI) (CA INDEX NAME)

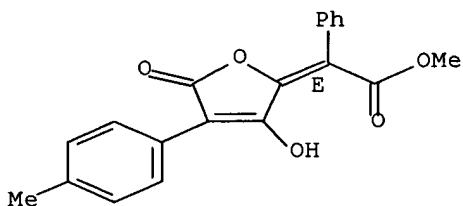
Double bond geometry as shown.



RN 37542-21-5 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

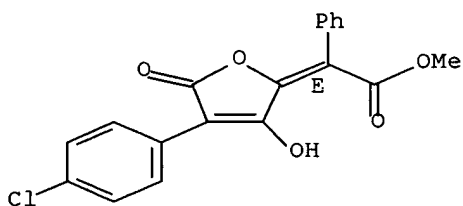
Double bond geometry as shown.



RN 37542-22-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

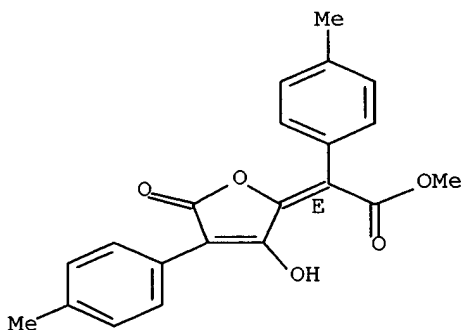
Double bond geometry as shown.



RN 37542-24-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanlydene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

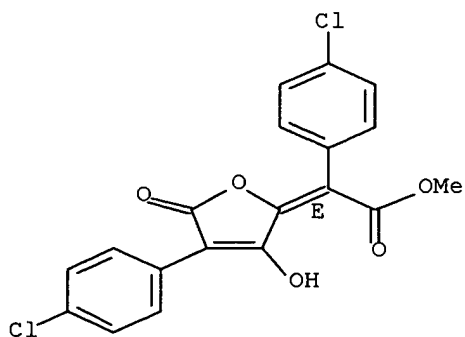
Double bond geometry as shown.



RN 37542-25-9 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

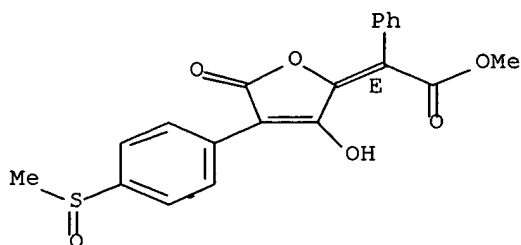
Double bond geometry as shown.



RN 38746-78-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-[4-(methylsulfinyl)phenyl]-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

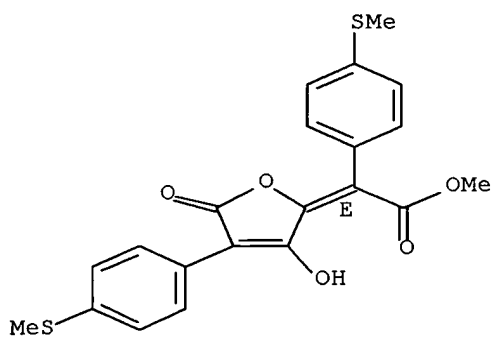
Double bond geometry as shown.



RN 38746-79-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy[4-(methylthio)phenyl]-5-oxo-2(5H)-furan-2-ylidene]-4-(methylthio)-, methyl ester, (E)- (9CI) (CA INDEX NAME)

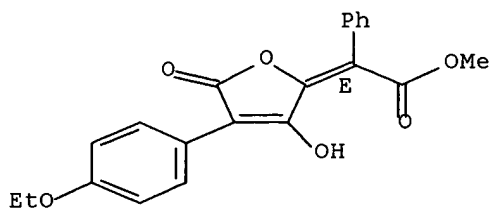
Double bond geometry as shown.



RN 38746-80-4 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-ethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

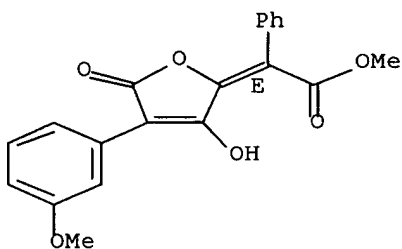
Double bond geometry as shown.



RN 38746-82-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-methoxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

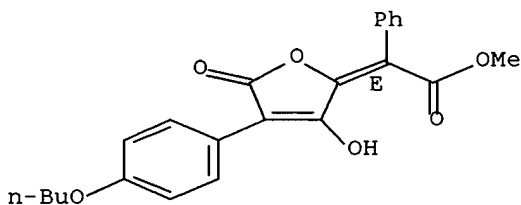
Double bond geometry as shown.



RN 38746-86-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-butoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

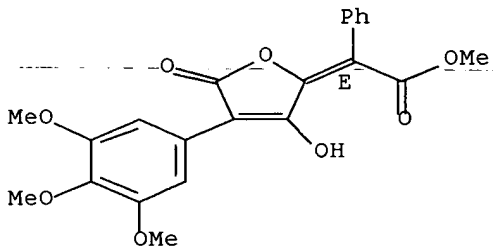
Double bond geometry as shown.



RN 38746-88-2 CAPLUS

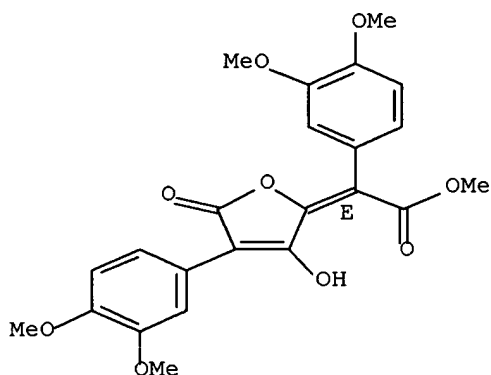
CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



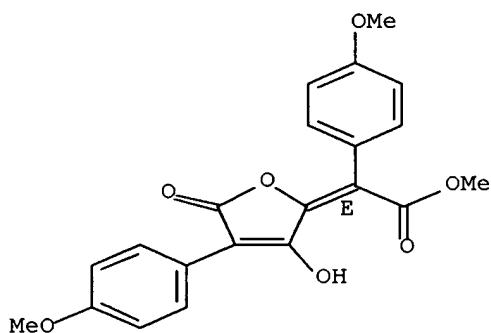
RN 38746-89-3 CAPLUS  
CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
furanylidene]-3,4-dimethoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 38746-90-6 CAPLUS  
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-4-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

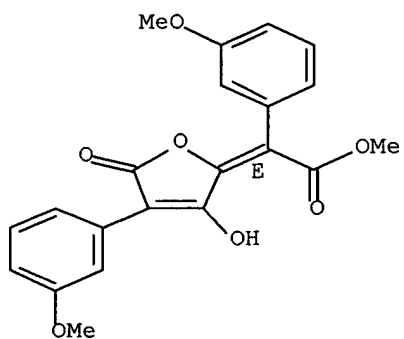
Double bond geometry as shown.



RN 38746-91-7 CAPLUS  
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-3-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

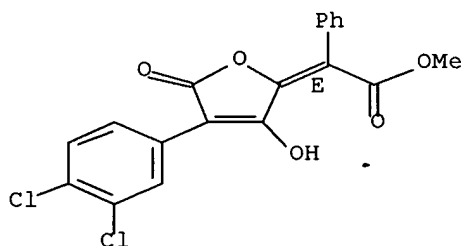
Double bond geometry as shown.



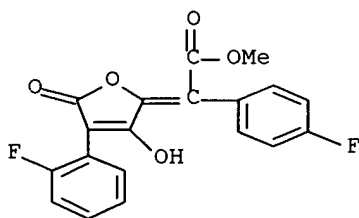


RN 38747-14-7 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dichlorophenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

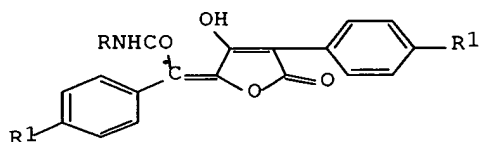


RN 59801-32-0 CAPLUS  
 CN Benzeneacetic acid, 4-fluoro-.alpha.-[4-(4-fluorophenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 118 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1976:421417 CAPLUS  
 DN 85:21417  
 TI Antiarthritic compositions comprising N-heterocyclic pulvinic acid amides  
 IN Weinstock, Joseph  
 PA Smithkline Corp., USA  
 SO U.S., 9 pp. Division of U.S. 3,895,021.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3947580	A	19760330	US 1975-562628	19750327
	US 3895021	A	19750715	US 1973-393861	19730904
	JP 50058067	A2	19750520	JP 1974-99429	19740828
	JP 58017473	B4	19830407		
	GB 1434156	A	19760505	GB 1974-38260	19740902
	BE 819495	A1	19750303	BE 1974-148174	19740903
PRAI	US 1973-393861		19730904		
GI					



AB Pulvinic acid amides I (R = 2-thiazolyl, 5-chloro-2-thiazolyl, 2-pyridyl,  
 R1 = H; R = 2-thiazolyl, R1 = Cl, EtO), having anti-arthritic activity  
 at  
 25 mg/kg (rats), were prepd. Thus, PhCH2CN condensed with (CO2Et)2 and  
 NaOEt, the PhCH(CN)COCO2Et treated with PhCH2CN in EtOH-NaOEt, the  
 (NCCHPhCO)2 cyclized with AcOH-H2SO4, the pulvinic acid lactonized with  
 Ac2O, and the lactone refluxed with 2-aminothiazole in CHCl3 to give I

(R  
 = 2-thiazolyl, R1 = H). Similarly prepd. were 4-phenyl-,  
 4-chloro-4-methyl-, and 4,4'-diacetoxypulvinic acid lactones.

IT **38747-01-2P 50689-14-0P 55032-45-6P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

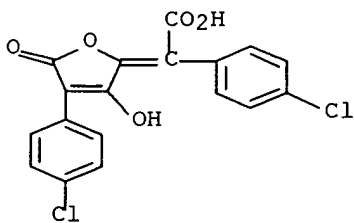
(prepn. and lactonization of)

RN 38747-01-2 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-

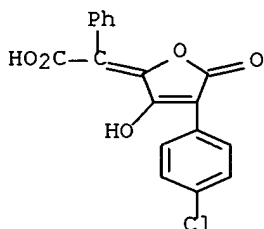
oxo-

2(5H)-furanlydene]- (9CI) (CA INDEX NAME)



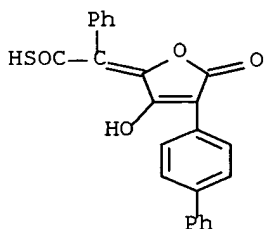
RN 50689-14-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



RN 55032-45-6 CAPLUS

CN Benzeneethanethioic acid, .alpha.-(3-[1,1'-biphenyl]-4-yl)-2-hydroxy-5-oxo-2(5H)-furanylidene)- (9CI) (CA INDEX NAME)

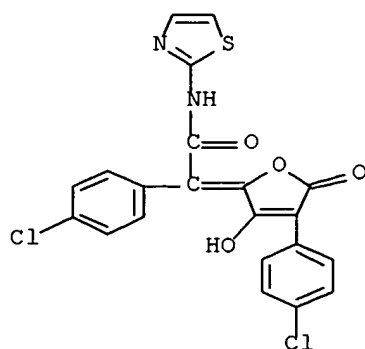


IT 55506-31-5P 55506-32-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

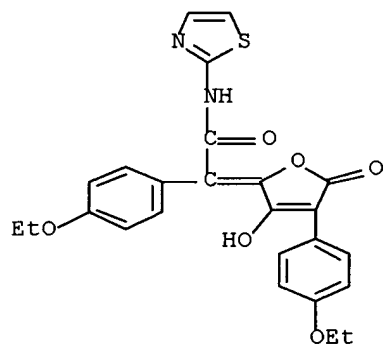
RN 55506-31-5 CAPLUS

CN Benzeneacetamide, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-N-2-thiazolyl- (9CI) (CA INDEX NAME)



RN 55506-32-6 CAPLUS

CN Benzeneacetamide, 4-ethoxy-.alpha.-[4-(4-ethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-N-2-thiazolyl- (9CI) (CA INDEX NAME)

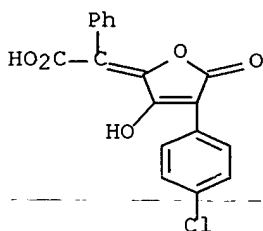


L9 ANSWER 119 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1976:421090 CAPLUS  
 DN 85:21090  
 TI Tetramic acid analogs of pulvinic acid  
 IN Weinstock, Joseph  
 PA Smithkline Corp., USA  
 SO U.S., 13 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3931207	A	19760106	US 1973-424581	19731214
	US 3984559	A	19761005	US 1975-623226	19751017
PRAI	US 1973-424581		19731214		
GI					

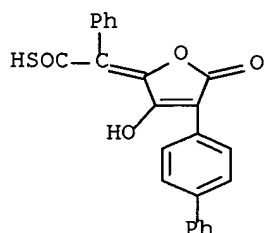
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Seven tetramic acid derivs. I (R = thiazolyl, pyridyl, chloropyridyl, 3-F3CC6H4, H, R1 = H; R = thiazolyl, R1 = Cl), inhibitors of adjuvant-induced polyarthrititis in rats at 50 mg/kg daily and antibacterials (no data), were prepd. (for R .noteq. H) in 7 steps by condensation of 4-R1C6H4CH2CN with (EtO2C)2 via furanone II and tetramic acid lactone III. Ring cleavage of III gave I. To prep. I (R = R1 = H),  
 BzCO2H was condensed with PhCH2CONHCH2CO2H to give anhydride IV which gave I (R = R1 = H) in 3 further steps. Seven further examples were given, but only the various intermediary compds. were characterized.  
 IT **50689-14-0 55032-45-6**  
 RL: RCT (Reactant); RACT (Reactant or reagent) (dehydration of)  
 RN 50689-14-0 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]- (9CI) (CA INDEX NAME)



RN 55032-45-6 CAPLUS  
 CN Benzeneethanethioic acid, .alpha.-[3-[1,1'-biphenyl]-4-yl-2-hydroxy-5-oxo-

2(5H)-furanylidene)- (9CI) (CA INDEX NAME)



IT 59522-40-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

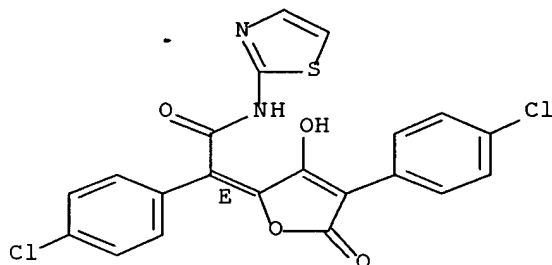
(Reactant or reagent)

(prepn. and cyclization of)

RN 59522-40-6 CAPLUS

CN Benzeneacetamide, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-N-2-thiazolyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



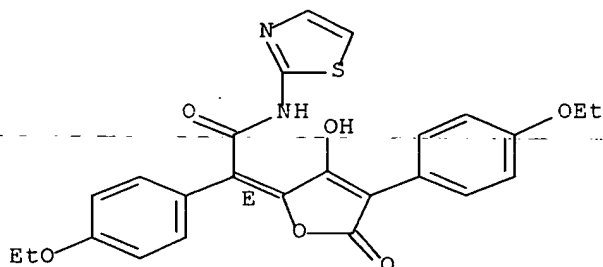
IT 59522-44-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 59522-44-0 CAPLUS

CN Benzeneacetamide, 4-ethoxy-.alpha.-[4-(4-ethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-N-2-thiazolyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

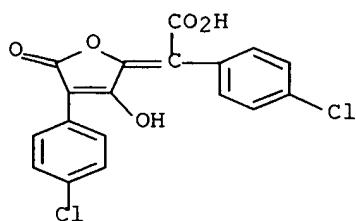


IT 38747-01-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. plus dehydration of)

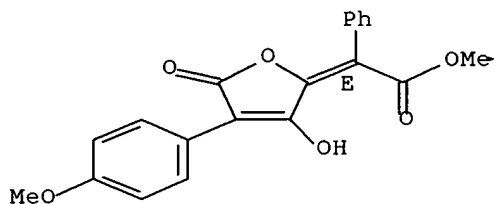
RN 38747-01-2 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]- (9CI) (CA INDEX NAME)



L9 ANSWER 120 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1976:417122 CAPLUS  
 DN 85:17122  
 TI Isolation of pinastric acid and ergosterol from *Parmelia caperata* (L.) Arch.  
 AU Serra, T.; Polonia, J.  
 CS Fac. Farm., Univ. Porto, Oporto, Port.  
 SO Journal of Pharmaceutical Sciences (1976), 65(5), 737-8  
 CODEN: JPMSAE; ISSN: 0022-3549  
 DT Journal  
 LA English  
 AB Among other common compds., pinastric acid and ergosterol were isolated for the 1st time from *P. caperata*. The isolation of these compds. is described; identification was made from the m.p. and uv, ir, and mass spectral data.  
 IT **481-64-1**  
 RL: BIOL (Biological study)  
 (from *Parmelia caperata*)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

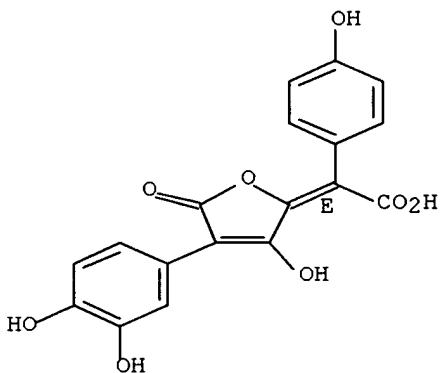
Double bond geometry as shown.



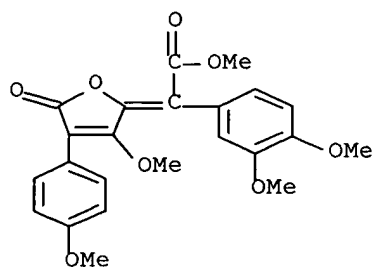


L9 ANSWER 121 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1976:132386 CAPLUS  
 DN 84:132386  
 TI Chemistry of fungi. 10. Metabolites of some fungal species  
 AU Briggs, L. H.; Cambie, R. C.; Dean, I. C.; Dromgoole, S. H.; Fergus, B. J.; Ingram, W. B.; Lewis, K. G.; Small, C. W.; Thomas, R.; Walker, D. A.  
 CS Dep. Chem., Univ. Auckland, Auckland, N. Z.  
 SO New Zealand Journal of Science (1975), 18(4), 565-76  
 CODEN: NZJSAB; ISSN: 0028-8365  
 DT Journal  
 LA English  
 AB Metabolites from cultures of *Peniophora gigantea*, *P. sacrata*, *Stereum purpureum*, *Daedalea trabea*, *Coniophora suffocata*, *C. tomentella*, *Hypoxylon balardieri*, *Hypomyces aurantius*, *Hypomyces chrysospermum*, *Hypomyces rosellus*, *Epicoccum nigrum*, *Paecilomyces javanicus*, *Isaria sinclairii*, a new *Isaria* species, and a new *Myxosporium* species have been investigated.  
 P. gigantea gives 2',3',5'-trimethoxy-p-terphenyl, the 1st methoxylated p-terphenyl isolated from a fungus.  
 IT **25287-88-1**  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
 (of fungi)  
 RN 25287-88-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

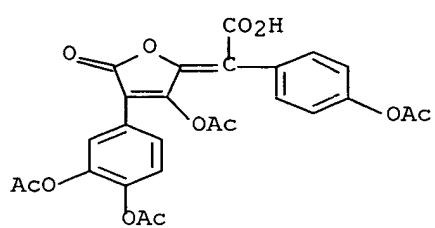


IT **49829-95-0P 59005-98-0P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 49829-95-0 CAPLUS  
 CN - Benzeneacetic acid, 3,4-dimethoxy-.alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)

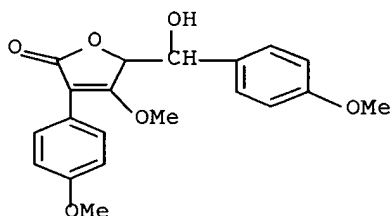


RN 59005-98-0 CAPLUS

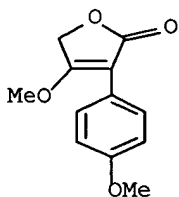
CN Benzeneacetic acid, 4-(acetyloxy)-.alpha.-[3-(acetyloxy)-4-[3,4-bis(acetyloxy)phenyl]-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



L9 ANSWER 122 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1976:59073 CAPLUS  
 DN 84:59073  
 TI Synthesis of pulvinones, metabolites of *Aspergillus terreus* and *Suillus grevillei*  
 AU Knight, David W.; Pattenden, Gerald  
 CS Dep. Chem., Univ. Nottingham, Nottingham, UK  
 SO Journal of the Chemical Society, Chemical Communications (1975), (21), 876-7  
 CODEN: JCCCAT; ISSN: 0022-4936  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB Reaction of the lactone I with Li N-cyclohexyl-N-isopropylamide and p-anisaldehyde or 3,4-dimethoxybenzaldehyde at -70.degree. gave carbinols which, on dehydration with p-MeC6H4SO3H in hot C6H6 gave O-methyl-4,4'-dimethoxypulvinone (II) and III, identical with pulvinones obtained from *A. terreus* and *S. grevillei*, resp. I was prepd. by condensation of p-MeOC6H4CH2CN with di-Et oxalate, reaction with Me2SO4, hydrolysis to a substituted maleic anhydride, and redn. with Li(Me3CO)3AlH or LiAlH4.  
 IT **58368-12-0P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT  
 . (Reactant or reagent)  
 . (prepn. and dehydration of)  
 RN 58368-12-0 CAPLUS  
 CN 2(5H)-Furanone, 5-[hydroxy(4-methoxyphenyl)methyl]-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



IT **58368-11-9P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT  
 (Reactant or reagent)  
 (prepn. and reaction with methoxybenzaldehyde)  
 RN 58368-11-9 CAPLUS  
 CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



IT 49829-96-1P 58368-10-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

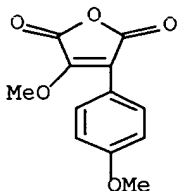
RACT

(Reactant or reagent)

(prepn. and redn. of)

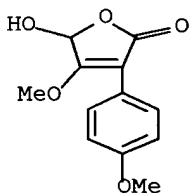
RN 49829-96-1 CAPLUS

CN 2,5-Furandione, 3-methoxy-4-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 58368-10-8 CAPLUS

CN 2(5H)-Furanone, 5-hydroxy-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



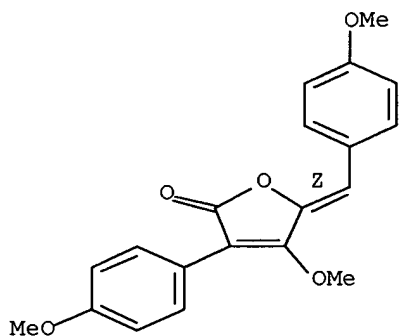
IT 49637-61-8P 51282-21-4P 55215-41-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 49637-61-8 CAPLUS

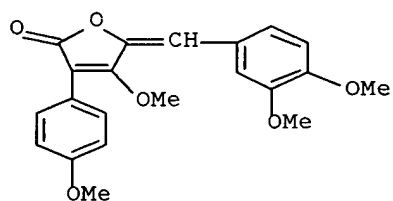
CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methylene]-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



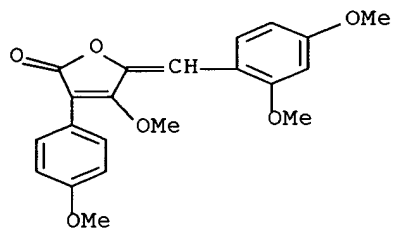
RN 51282-21-4 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dimethoxyphenyl)methylene]-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



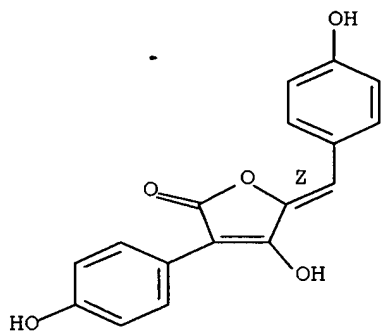
RN 55215-41-3 CAPLUS

CN 2(5H)-Furanone, 5-[(2,4-dimethoxyphenyl)methylene]-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

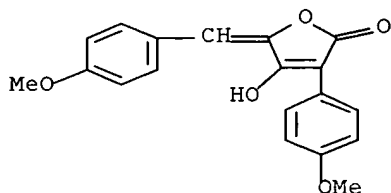


L9 ANSWER 123 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1976:17039 CAPLUS  
 DN 84:17039  
 TI New metabolites of *Aspergillus terreus*. 3-Hydroxy-2,5-bis(p-hydroxyphenyl)penta-2,4-dien-4-olide and derivatives  
 AU Golding, Bernard T.; Rickards, Rodney W.; Vanek, Zdenko  
 CS Dep. Chem., Univ. Manchester, Manchester, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1975), (19), 1961-3  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB The structure of aspergillide B1 (I; R = R2 = H), isolated from *A. terreus*, was detd. from spectral data, and by the synthesis of its tri-Me deriv. I (R = R1 = Me) by condensing [p-MeOC6H4CH2CO]2 with MeO2CCl to give a mono-Me deriv. I (R = Me, R1 = H).  
 IT **49637-60-7P**  
 RL: PREP (Preparation) (from *Aspergillus terreus*, mol. structure of)  
 RN 49637-60-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT **49637-64-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. and methylation of)  
 RN 49637-64-1 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methylene]- (9CI) (CA INDEX NAME)



IT **58166-98-6P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 58166-98-6 CAPLUS

L9 ANSWER 124 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1975:609414 CAPLUS  
 DN 83:209414  
 TI Anti-arthritic compositions comprising amide derivatives of pulvinic acid  
 IN Sutton, Blaine M.; Weinstock, Joseph  
 PA Smithkline Corp., USA  
 SO U.S., 5 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3907997	A	19750923	US 1971-192588	19711026
PRAI	US 1971-192588		19711026		

GI For diagram(s), see printed CA Issue.

AB The antiarthritic pulvinic acid amide derivs., I where R1 and R2 = H, Cl-4

alkyl, Cl, Br, and F were synthesized and formulations for their administration were described. Thus, 4,4'-dichloropulvinamide [57248-91-6] (whose synthesis was described) 50, Mg stearate 5, and lactose 350 mg/capsule were screened through a No. 40 mesh screen, mixed,

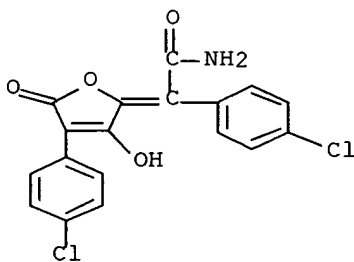
and filled into No. 0 hard gelatin capsule.

IT **57248-91-6P 57248-92-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and antiarthritic activity of)

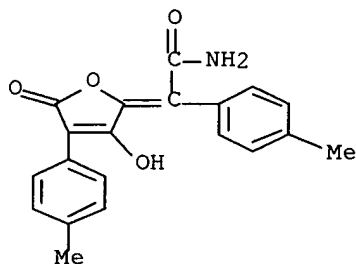
RN 57248-91-6 CAPLUS

CN Benzeneacetamide, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]- (9CI) (CA INDEX NAME)



RN 57248-92-7 CAPLUS

CN Benzeneacetamide, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanlydene]-4-methyl- (9CI) (CA INDEX NAME)

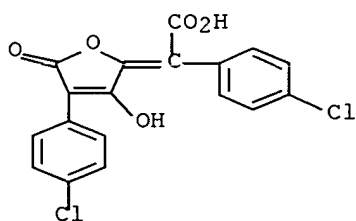


IT 38747-01-2P 38747-07-8P 50689-14-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT (Reactant or reagent) (prepn. and cyclization of)

RN 38747-01-2 CAPLUS

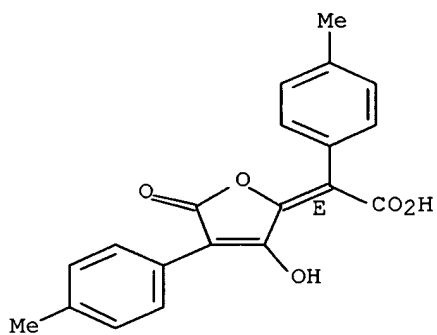
CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-methylphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



RN 38747-07-8 CAPLUS

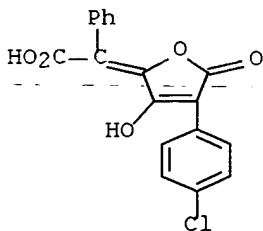
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 50689-14-0 CAPLUS

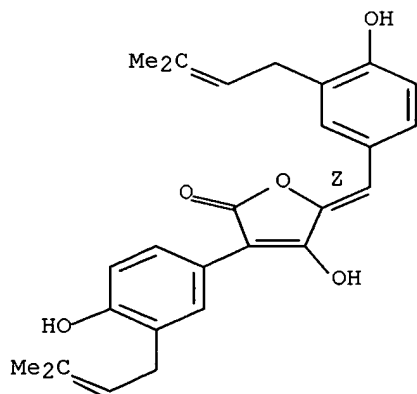
CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)





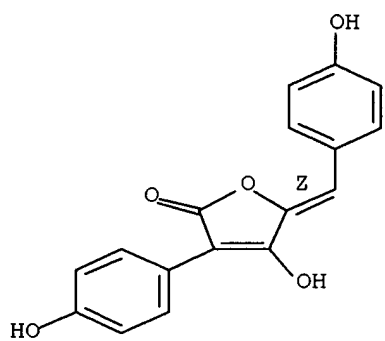
L9 ANSWER 125 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1975:592754 CAPLUS  
 DN 83:192754  
 TI Biosynthesis of pulvinone derivatives in *Aspergillus terreus*. Enzymatic prenylation of dihydroxypulvinone  
 AU Ojima, Nobutoshi; Ogura, Kyoza; Seto, Shuichi  
 CS Chem. Res. Inst. Non-Aqueous Solutions, Tohoku Univ., Sendai, Japan  
 SO Journal of the Chemical Society, Chemical Communications (1975), (17), 717-18  
 CODEN: JCCCAT; ISSN: 0022-4936  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB The crude (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> fraction of a cell-free ext. from *A. terreus* catalyzed the prenylation of dihydroxypulvinone (I) by 3,3-dimethylallyl pyrophosphate to give II. II may be a precursor for related prenyl derivs. of I found in *A. terreus*.  
 IT **57744-69-1P**  
 RL: PREP (Preparation)  
 (from dihydroxypulvinone, by *Aspergillus terreus* enzyme-catalyzed prenylation)  
 RN 57744-69-1 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-[4-hydroxy-3-(3-methyl-2-butenyl)phenyl]-5-[[4-hydroxy-3-(3-methyl-2-butenyl)phenyl]methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

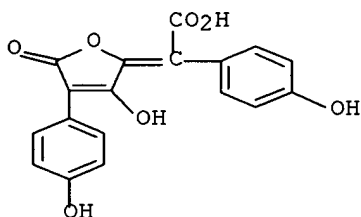


IT **49637-60-7**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prenylation of, by dimethylallyl pyrophosphate, *Aspergillus terreus* enzyme-catalyzed)  
 RN 49637-60-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

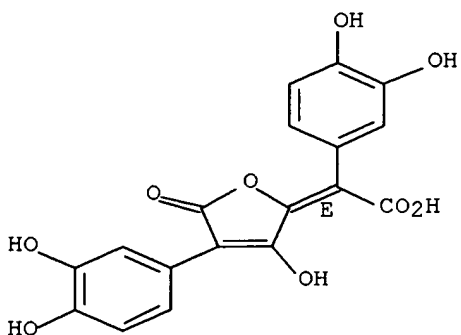


L9 ANSWER 126 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1975:560740 CAPLUS  
 DN 83:160740  
 TI Occurrence and evaluation of pigments in higher fungi  
 AU Besl, H.; Bresinsky, A.; Kronawitter, I.  
 CS Fed. Rep. Ger.  
 SO Zeitschrift fuer Pilzkunde (1975), 41(1-2), 81-97  
 CODEN: ZEPIBV; ISSN: 0044-3352  
 DT Journal  
 LA German  
 AB Results on the distribution of pigment characteristics in higher fungi,  
 and, in particular, in basidiomycetes are reported. Pigments were  
 demonstrated using, primarily chromatog. methods. The following  
 pigments  
 are reported: trametin, thelephoric acid, muscaflavine, riboflavine,  
 atromentic acid, xerocomic acid, variegatic acid, gomphidic acid,  
 grevillin A, B, C, and D, boviquinone-3 and -4, atromentin, gyrocyanin,  
 gyroporin, and variegatorubin.  
 IT 521-56-2 20988-30-1 25287-88-1  
 25328-77-2 27286-59-5  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
 BIOL (Biological study); OCCU (Occurrence)  
 (of higher fungi)  
 RN 521-56-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-  
 oxo-  
 2(5H)-furanlydene]- (9CI) (CA INDEX NAME)



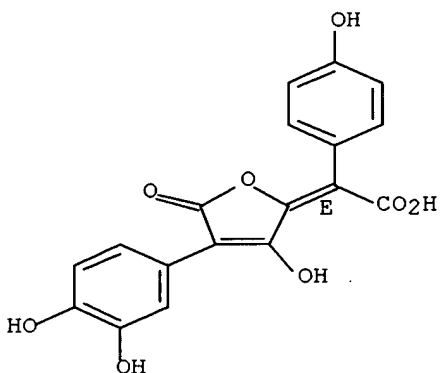
RN 20988-30-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-  
 2(5H)-  
 furanylidene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



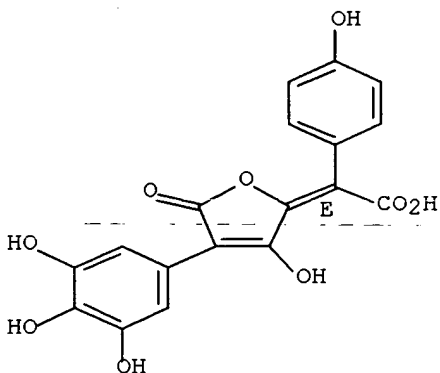
RN 25287-88-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 25328-77-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trihydroxyphenyl)-2(5H)-furanylidene]-, (.alpha.E)- (9CI) (CA INDEX NAME)

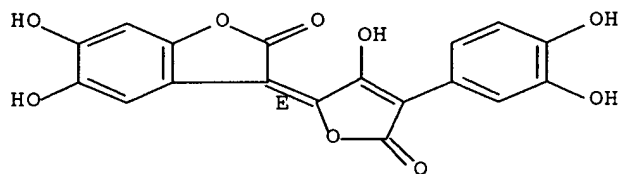
Double bond geometry as shown.



RN 27286-59-5 CAPLUS

CN 2(3H)-Benzofuranone, 3-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
furanylidene]-5,6-dihydroxy-, (3E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 127 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1975:409762 CAPLUS  
 DN 83:9762  
 TI .alpha..beta.-Unsaturated esters of vulpinic acid  
 IN Sutton, Blaine M.  
 PA Smithkline Corp.  
 SO U.S., 6 pp. Division of U.S. 3,749,740 (CA 79: 91979w).  
 CODEN: USXXAM  
 DT Patent  
 LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3865947	A	19750211	US 1973-357982	19730507
	US 3749740	A	19730731	US 1972-276020	19720728
PRAI	US 1971-150209		19710604		
	US 1972-276020		19720728		

GI For diagram(s), see printed CA Issue.

AB The vulpinic acid derivs. I (R, R1 = H, 4-MeO; R = R1 = H, 4-Cl, 4-F, 3,4,5-(MeO)C6H3; R2 = H, CH2:CHCO, CH2:CMeco) were prepd. Thus, PhCH2CN was treated with EtO2CCO2Et and the resulting PhCH(CN)COCO2Et treated

with

PhCH2CN to give PhCH(CN)COCOCH(CN)Ph which was cyclized to pulvinic acid lactone(II). II and MeOH gave I (R = R1 = H, R2 = H), which with CH2:CHCOCl gave I (R = R1 = H, R2 = COCH:CH2). At 10-150 mg I were antiarthritic.

IT **37542-25-9P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

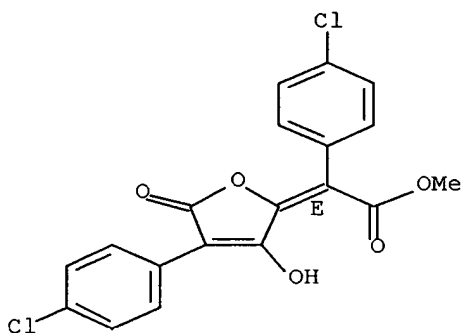
(Reactant or reagent)  
 (prepn. and acylation of)

RN 37542-25-9 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-

2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



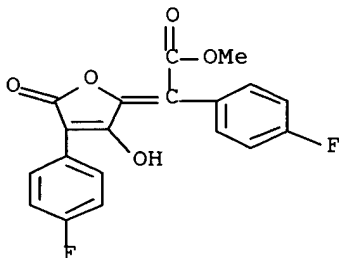
IT **38731-08-7P 38747-01-2P 38747-07-8P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

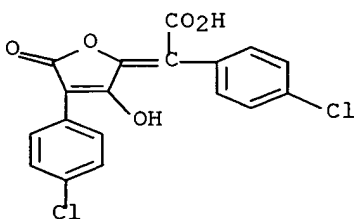
RACT

(Reactant or reagent)  
 (prepn. and cyclization of)

RN 38731-08-7 CAPLUS  
 CN Benzeneacetic acid, 4-fluoro-.alpha.-[4-(4-fluorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester (9CI) (CA INDEX NAME)

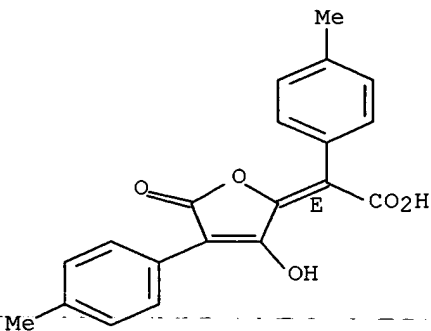


RN 38747-01-2 CAPLUS  
 CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]- (9CI) (CA INDEX NAME)



RN 38747-07-8 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furan-2-ylidene]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

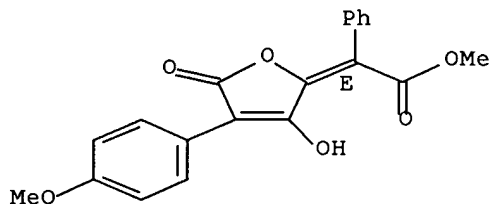
Double bond geometry as shown.



IT **481-64-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT  
 (Reactant or reagent)

(prepn. and esterification of)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
 furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

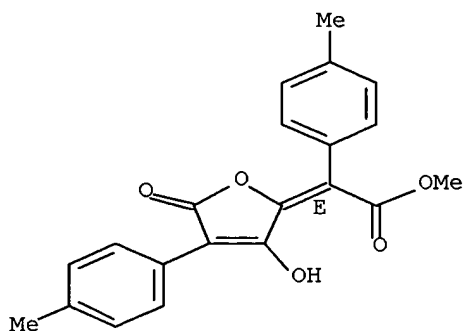


IT 37542-24-8P 38746-88-2P 38746-90-6P  
 50688-95-4P 50688-98-7P 50689-05-9P  
 55697-19-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

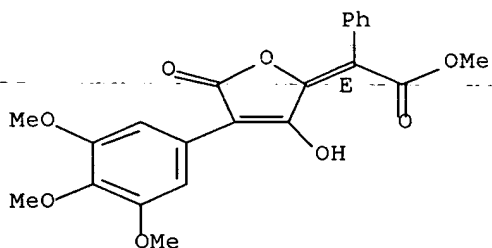
RN 37542-24-8 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-  
 furanylidene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 38746-88-2 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-  
 2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

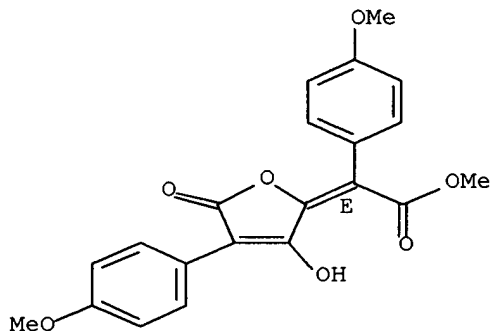




RN 38746-90-6 CAPLUS

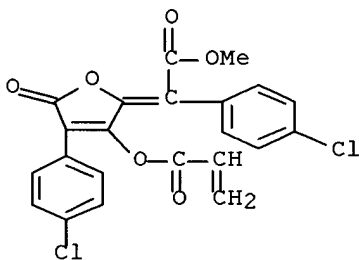
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-4-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



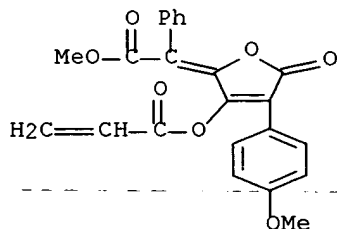
RN 50688-95-4 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-5-oxo-3-[(1-  
oxo-2-propenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 50688-98-7 CAPLUS

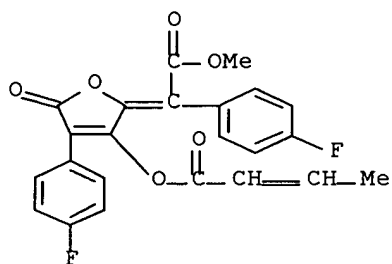
CN Benzeneacetic acid, .alpha.-[4-(4-methoxyphenyl)-5-oxo-3-[(1-oxo-2-  
propenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 50689-05-9 CAPLUS

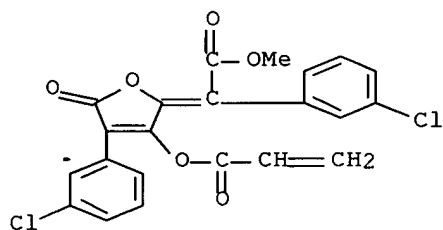
CN Benzeneacetic acid, 4-fluoro-.alpha.-[4-(4-fluorophenyl)-5-oxo-3-[(1-  
oxo-2-

butenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 55697-19-3 CAPLUS

CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chlorophenyl)-5-oxo-3-[(1-oxo-2-(3-chlorophenyl)-2-propenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 128 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1975:160233 CAPLUS  
 DN 82:160233  
 TI Thiopulvinic acid derivatives  
 IN Weinstock, Joseph  
 PA Smithkline Corp.  
 SO U.S., 5 pp. Division of U.S. 3,780,064 (CA 80: 95710v).  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3852462	A	19741203	US 1973-393236	19730830
	US 3780064	A	19731218	US 1972-267762	19720630
PRAI	US 1972-267762		19720630		

GI For diagram(s), see printed CA Issue.

AB Thiopulvinic acid ester derivs. (I, R = alkyl or aryl and X, Y = H, Cl, Ph, OMe) having antiarthritic activity in rats were prepd. by treating the

corresponding pulvinic acid dilactone (II) with the appropriate mercaptan

(RSH) and NaH. Thus, refluxing phenylacetonitrile [140-29-4] and di-Et oxalate [95-92-1] 2 hr in EtOH in the presence of EtONa gave Et 3-cyano-3-phenylpyruvate [6362-63-6], which with more PhCH<sub>2</sub>CN and EtONa provided 2,5-diphenyl-3,4-dioxoadiponitrile (III) [10471-29-1]. III was hydrolyzed to pulvinic acid [26548-70-9], which in hot Ac<sub>2</sub>O formed the lactone (II, X = Y = H) [6273-79-6]. MeSH [74-93-1] was bubbled into

the pulvinic acid lactone contg. NaH to give Me thiopulvinate (I, R = Me, X

= Y = H) [51796-34-0]. A tablet formulation based on Me thiopulvinate (10

mg/tablet) is given.

IT **51796-37-3**

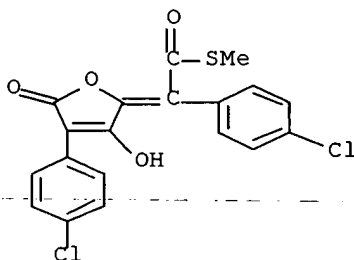
RL: BIOL (Biological study)

(antiarthritic)

RN 51796-37-3 CAPLUS

CN Benzeneethanethioic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-

oxo-2(5H)-furanylidene]-, S-methyl ester (9CI) (CA INDEX NAME)



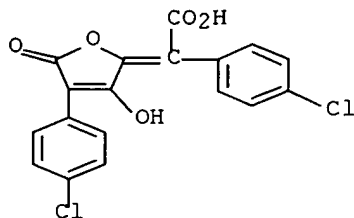
IT **38747-01-2 55032-45-6**

RL: RCT (Reactant); RACT (Reactant or reagent)

(lactonization of)

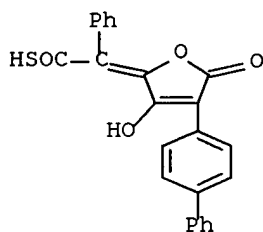
RN 38747-01-2 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



RN 55032-45-6 CAPLUS

CN Benzeneethanethioic acid, .alpha.- (3-[1,1'-biphenyl]-4-yl-2-hydroxy-5-oxo-2(5H)-furanylidene)- (9CI) (CA INDEX NAME)

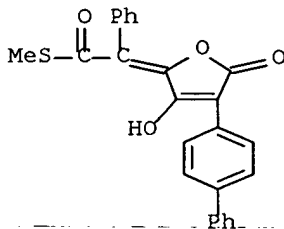


IT 51796-38-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

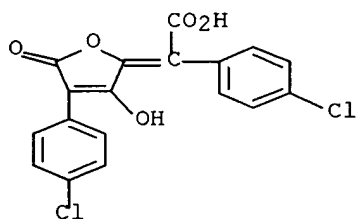
RN 51796-38-4 CAPLUS

CN Benzeneethanethioic acid, .alpha.- (4-[1,1'-biphenyl]-4-yl-3-hydroxy-5-oxo-2(5H)-furanylidene)-, S-methyl ester (9CI) (CA INDEX NAME)

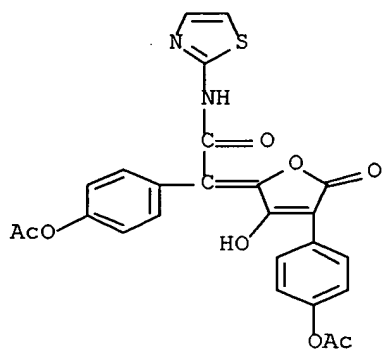


L9 ANSWER 129 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1975:156047 CAPLUS  
 DN 82:156047  
 TI N-Heterocyclic pulvinamides  
 IN Weinstock, Joseph  
 PA Smithkline Corp., USA  
 SO Ger. Offen., 28 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2442210	A1	19750306	DE 1974-2442210	19740904
	US 3895021	A	19750715	US 1973-393861	19730904
	JP 50058067	A2	19750520	JP 1974-99429	19740828
	JP 58017473	B4	19830407		
	GB 1434156	A	19760505	GB 1974-38260	19740902
	BE 819495	A1	19750303	BE 1974-148174	19740903
PRAI	US 1973-393861		19730904		
GI	For diagram(s), see printed CA Issue.				
AB	Eight pulvinamides I (R = NHR <sub>1</sub> ; R <sub>1</sub> = e.g. 2-thiazolyl, 5-chloro-2-thiazolyl, 2-pyridyl, or 6-chloro-3-pyridazinyl; R <sub>2</sub> = e.g. H or Cl), useful as antiarthritic agents (no data), were prepd. by refluxing the lactones II with R <sub>1</sub> NH <sub>2</sub> .				
IT	<b>38747-01-2P</b>				
RL:	RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);				
RACT	(Reactant or reagent) (prepn. and dehydration of)				
RN	38747-01-2 CAPLUS				
CN	Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)				



IT **55506-40-6P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT  
 (Reactant or reagent)  
 (prepn. and hydrolysis of)  
 RN 55506-40-6 CAPLUS  
 CN Benzeneacetamide, 4-(acetyloxy)-.alpha.-[4-[4-(acetyloxy)phenyl]-3-hydroxy-5-oxo-2(5H)-furanylidene]-N-2-thiazolyl- (9CI) (CA INDEX NAME)

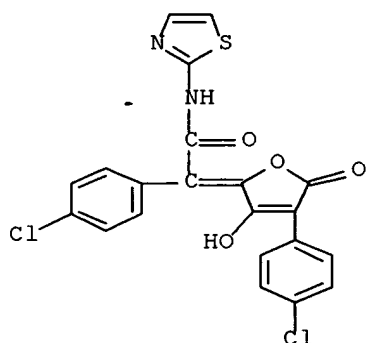


IT 55506-31-5P 55506-32-6P 55506-36-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of antiarthritic)

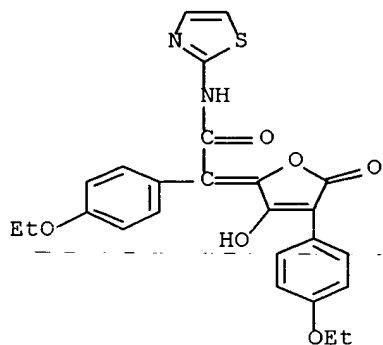
RN 55506-31-5 CAPLUS

CN Benzeneacetamide, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-N-2-thiazolyl- (9CI) (CA INDEX NAME)



RN 55506-32-6 CAPLUS

CN Benzeneacetamide, 4-ethoxy-.alpha.-[4-(4-ethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-N-2-thiazolyl- (9CI) (CA INDEX NAME)

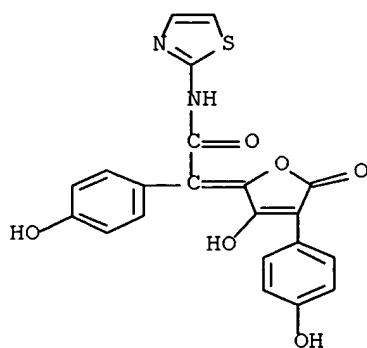


RN 55506-36-0 CAPLUS

CN Benzeneacetamide, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-

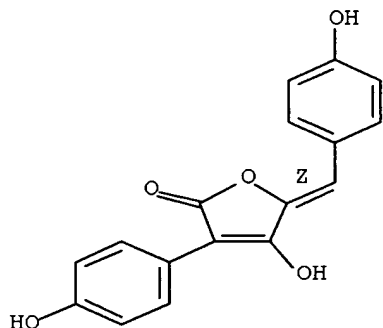
oxo-

2(5H)-furanylidene]-N-2-thiazolyl- (9CI) (CA INDEX NAME)



L9 ANSWER 130 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1975:151887 CAPLUS  
 DN 82:151887  
 TI Structures of pulvinone derivatives from *Aspergillus terreus*  
 AU Ojima, Nobutoshi; Takenaka, Shunsuke; Seto, Shuichi  
 CS Chem. Res. Inst. Non-Aqueous Solutions, Tohoku Univ., Sendai, Japan  
 SO Phytochemistry (Elsevier) (1975), 14(2), 573-6  
 CODEN: PYTCAS; ISSN: 0031-9422  
 DT Journal  
 LA English  
 AB The structures were established for 6 pulvinone derivs., together with  
 3-(p-hydroxyphenyl)-4-hydroxy-5-(p-hydroxybenzylidene)-2(5H)-furanone  
 (dihydroxy pulvinone), which were all isolated from a culture of *A.*  
*terreus*. Dihydroxy pulvinone is the fundamental structure for the 6 new  
 compds., which have 1 more hydroxyl group and (or) 2 3,3-dimethylallyl  
 or related groups substituted on the aryl nuclei.  
 IT **49637-60-7P 49637-61-8P 55215-34-4P**  
**55215-38-8P 55215-40-2P 55215-41-3P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 49637-60-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-  
 hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

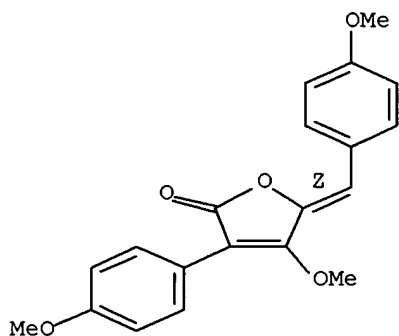
Double bond geometry as shown.



RN 49637-61-8 CAPLUS  
 CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)-5-[(4-  
 methoxyphenyl)methylene]-, (Z)- (9CI) (CA INDEX NAME)

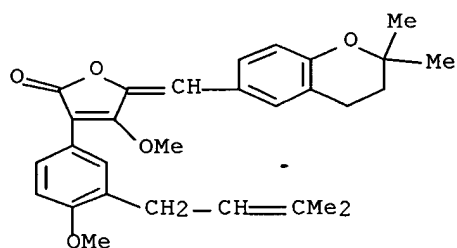
Double bond geometry as shown.





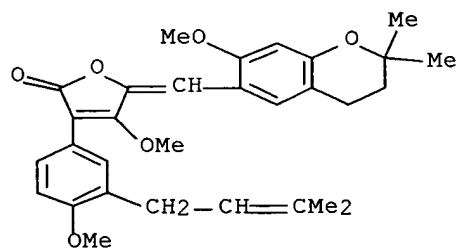
RN 55215-34-4 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dihydro-2,2-dimethyl-2H-1-benzopyran-6-yl)methylene]-4-methoxy-3-[4-methoxy-3-(3-methyl-2-butenyl)phenyl]-  
(9CI)  
(CA INDEX NAME)



RN 55215-38-8 CAPLUS

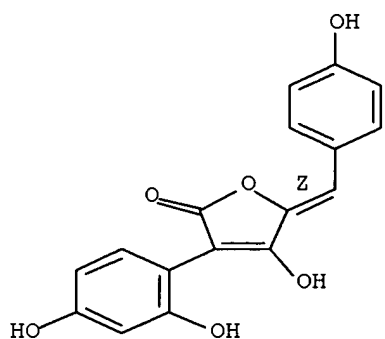
CN 2(5H)-Furanone, 5-[(3,4-dihydro-7-methoxy-2,2-dimethyl-2H-1-benzopyran-6-yl)methylene]-4-methoxy-3-[4-methoxy-3-(3-methyl-2-butenyl)phenyl]-  
(9CI)  
(CA INDEX NAME)



RN 55215-40-2 CAPLUS

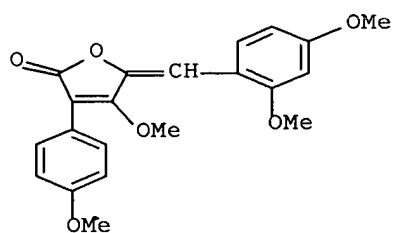
CN 2(5H)-Furanone, 3-(2,4-dihydroxyphenyl)-4-hydroxy-5-[(4-hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



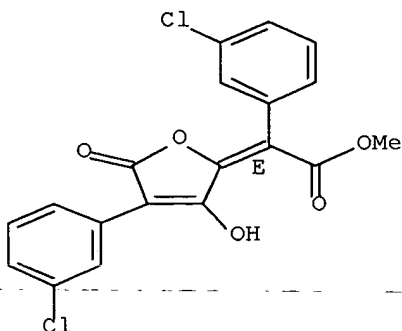
RN 55215-41-3 CAPLUS

CN 2(5H)-Furanone, 5-[(2,4-dimethoxyphenyl)methylene]-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

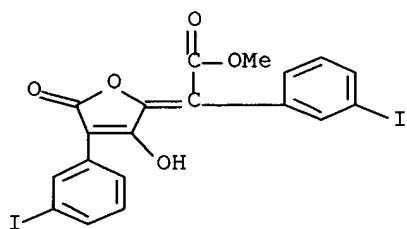


L9 ANSWER 131 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1975:118788 CAPLUS  
 DN 82:118788  
 TI Vulpinic acids as potential antiinflammatory agents. 1. Vulpinic acids with substituents in the aromatic rings  
 AU Foden, F. R.; McCormick, J.; O'Mant, D. M.  
 CS Pharm. Div., Imp. Chem. Ind. Ltd., Macclesfield/Cheshire, UK  
 SO Journal of Medicinal Chemistry (1975), 18(2), 199-203  
 CODEN: JMCMAR; ISSN: 0022-2623  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB Of a series of 25 title compds., substituted in either or both arom. rings, the sym. substituted compds. were prepd. via the pulvinic lactone, while the asym. substituted compds. were prepd. by the reaction of an arylcyanopyruvate with a benzyl cyanide, followed by hydrolysis, ring closure, methanolysis, and fractional crystn. 3,3'-Dichlorovulpinic acid  
 (I) [32883-73-1] and 3-chlorovulpinic acid (II) [32883-83-3] were active at 5 and 2.5 mg/kg, resp., against adjuvant-induced arthritis in rats. II caused hyperventilation after oral dosing to dogs, while I caused gastric damage. Structure-activity relations are discussed.  
 IT 32883-73-1P 32883-76-4P 32883-77-5P  
 32883-78-6P 33050-81-6P 37542-22-6P  
 37542-24-8P 37542-25-9P 38746-89-3P  
 38746-90-6P 38746-91-7P 39133-76-1P  
 54805-66-2P 54805-67-3P 54805-68-4P  
 54805-69-5P 54805-70-8P 54805-71-9P  
 54805-72-0P 54805-74-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. and inflammation inhibition by)  
 RN 32883-73-1 CAPLUS  
 CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



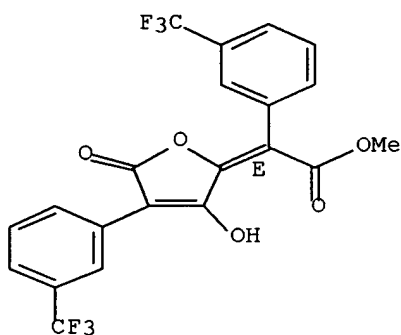
RN 32883-76-4 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-iodophenyl)-5-oxo-2(5H)-furanylidene]-3-iodo-, methyl ester (9CI) (CA INDEX NAME)



RN 32883-77-5 CAPLUS

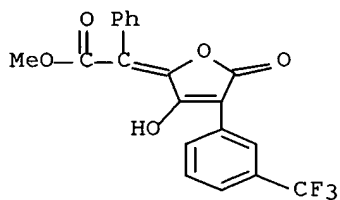
CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-[3-(trifluoromethyl)phenyl]-2(5H)-furan-2-ylidene]-3-(trifluoromethyl)-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



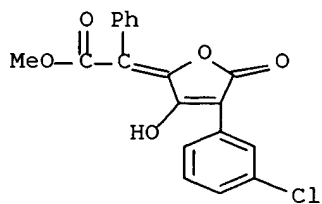
RN 32883-78-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-[3-(trifluoromethyl)phenyl]-2(5H)-furan-2-ylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 33050-81-6 CAPLUS

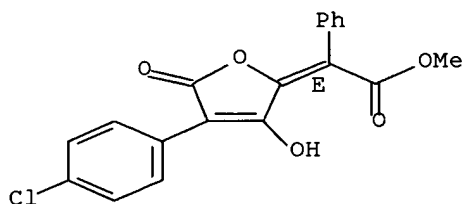
CN Benzeneacetic acid, .alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 37542-22-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-5-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

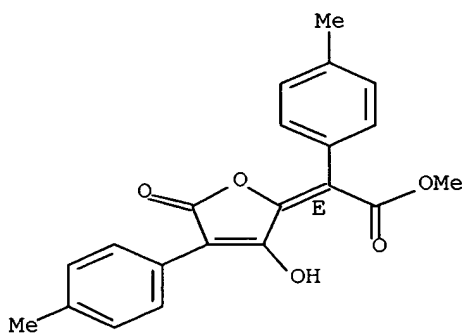
Double bond geometry as shown.



RN 37542-24-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furan-5-ylidene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

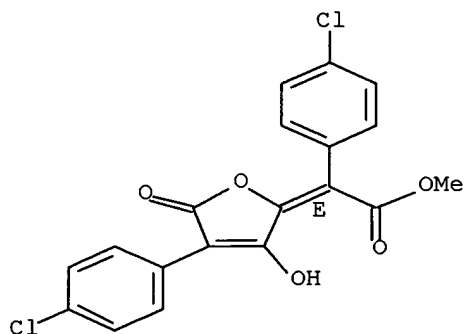
Double bond geometry as shown.



RN 37542-25-9 CAPLUS

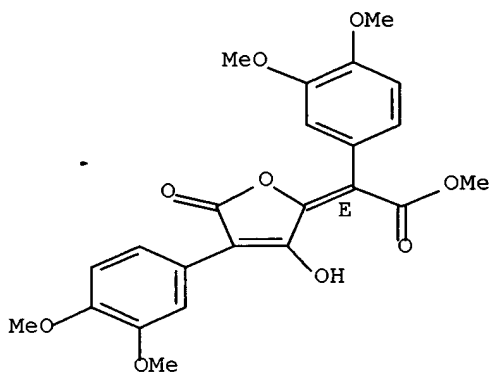
CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-5-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



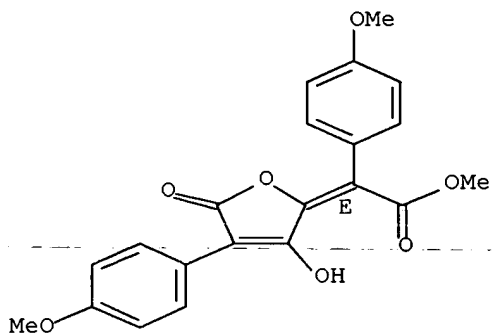
RN 38746-89-3 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-3,4-dimethoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 38746-90-6 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
 furanylidene]-4-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

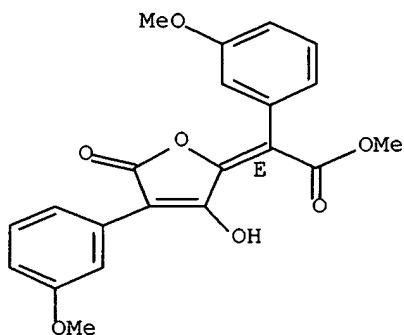
Double bond geometry as shown.



RN 38746-91-7 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-methoxyphenyl)-5-oxo-2(5H)-

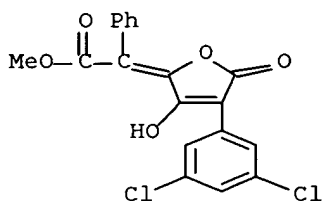
furanylidene]-3-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



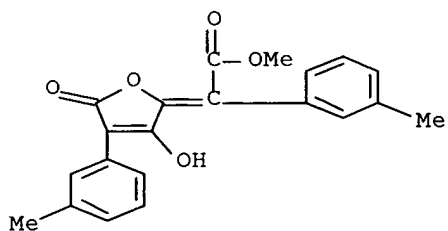
RN 39133-76-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,5-dichlorophenyl)-3-hydroxy-5-oxo-2(5H)-  
furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



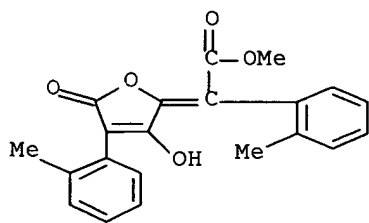
RN 54805-66-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-methylphenyl)-5-oxo-2(5H)-  
furanylidene]-3-methyl-, methyl ester (9CI) (CA INDEX NAME)



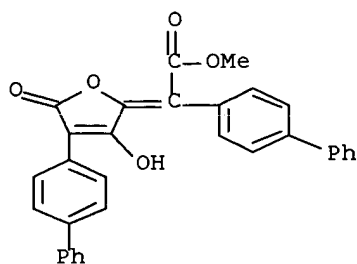
RN 54805-67-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(2-methylphenyl)-5-oxo-2(5H)-  
furanylidene]-2-methyl-, methyl ester (9CI) (CA INDEX NAME)



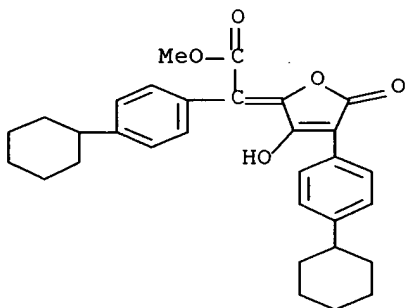
RN 54805-68-4 CAPLUS

CN [1,1'-Biphenyl]-4-acetic acid, .alpha.-[4-[1,1'-biphenyl]-4-yl-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 54805-69-5 CAPLUS

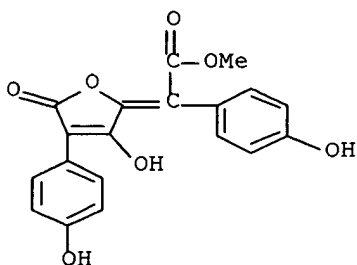
CN Benzeneacetic acid, 4-cyclohexyl-.alpha.-[4-(4-cyclohexylphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 54805-70-8 CAPLUS

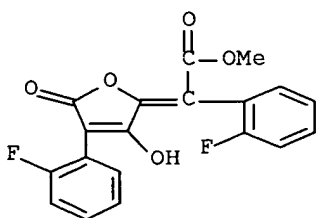
CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)





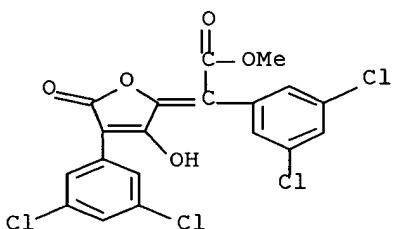
RN 54805-71-9 CAPLUS

CN Benzeneacetic acid, 2-fluoro-.alpha.-[4-(2-fluorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



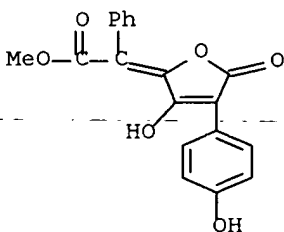
RN 54805-72-0 CAPLUS

CN Benzeneacetic acid, 3,5-dichloro-.alpha.-[4-(3,5-dichlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 54805-74-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 132 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1974:520438 CAPLUS

DN 81:120438

TI Antiinflammatory, analgesic, and antipyretic 2-[.alpha.-(methoxycarbonyl)benzylidene]-4-phenyl-3-hydroxy-5-oxo-2,5-dihydrofuran derivatives

IN Foden, Frederick R.; McCormick, John; O'Mant, Derrick M.

PA Imperial Chemical Industries Ltd.

SO Brit., 3 pp.

CODEN: BRXXAA

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1358382	A	19740703	GB 1971-10037	19720314
PRAI	GB 1971-10037		19720314		

GI For diagram(s), see printed CA Issue.

AB Title compds. I and II which had antiinflammatory and antipyretic activity

when tested in the rat and analgesic activity when tested in the mouse were prepd. Esterification of the corresponding acid with (MeO)2SO2

gave

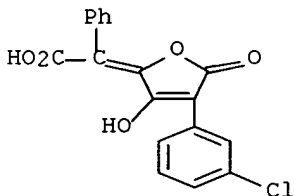
I and treatment of 3-(m-chlorophenyl)-6-phenyl-2,5-dioxo-2,5-dihydrofuro [3,2-b]-furan with MeOH in the presence of HCl gave I and II.

IT **54023-30-2**

RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of)

RN 54023-30-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)

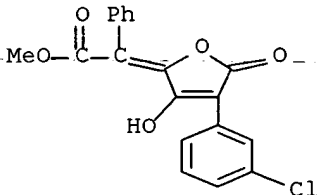


IT **33050-81-6P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 33050-81-6 CAPLUS

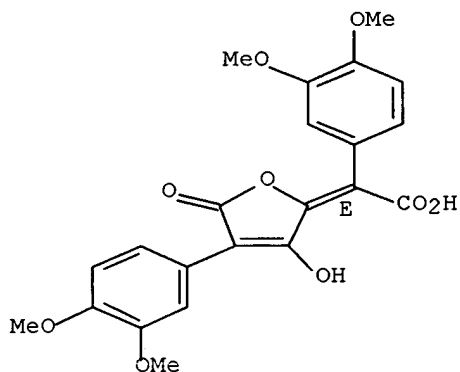
CN Benzeneacetic acid, .alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 133 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:520257 CAPLUS  
 DN 81:120257  
 TI Substituted 2,5-diphenyl-3,4,6-trihydroxy-.DELTA.2,4-hexadienoic acid  
 lactones (1,4) in the treatment of arthritis  
 IN Sutton, Blaine M.  
 PA Smithkline Corp.  
 SO U.S., 4 pp. Division of U. S. 3,772,341 (CA 80;133047u).  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3821398	A	19740628	US 1973-383643	19730730
PRAI	US 1970-148890		19700601		
GI	For diagram(s), see printed CA Issue.				
AB	Title lactones (I; R = CH <sub>2</sub> OH, R <sub>1</sub> = Ph or substituted phenyl), useful as inhibitors for adjuvant-induced polyarthritis in rats, were prepd. by redn. of pulvinic acids I (R = CO <sub>2</sub> H) (II) with B <sub>2</sub> H <sub>6</sub> in THF. II were prepd. in several steps from R <sub>1</sub> CH <sub>2</sub> CN. Thus, condensation of PhCH <sub>2</sub> CN with (CO <sub>2</sub> Et) <sub>2</sub> in THF contg. EtONa gave PhCH(CN)COCO <sub>2</sub> Et, which with PhCH <sub>2</sub> CN gave PhCH(CN)COCOCHPhCN. Hydrolysis of the latter with aq. HOAc-H <sub>2</sub> SO <sub>4</sub> gave II (R <sub>1</sub> = Ph).				
IT	<b>38747-10-3P</b>				
RL:	RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);				
RACT	(Reactant or reagent) (prepn. and redn. of)				
RN	38747-10-3 CAPLUS				
CN	Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dimethoxy-, (E)- (9CI) (CA INDEX NAME)				

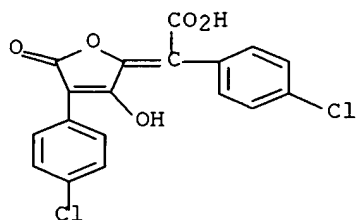
Double bond geometry as shown.



IT **38747-01-2P 38747-07-8P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT  
 (Reactant or reagent)  
 (prepn. and reduction of)

RN 38747-01-2 CAPLUS

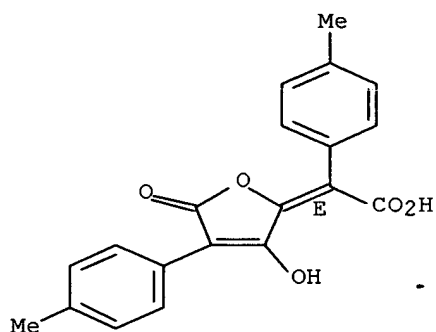
CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



RN 38747-07-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

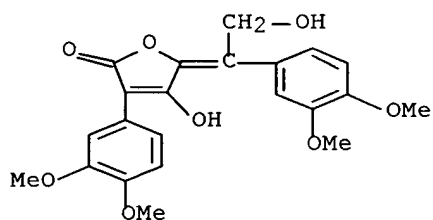


IT 53587-71-6P 53658-64-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

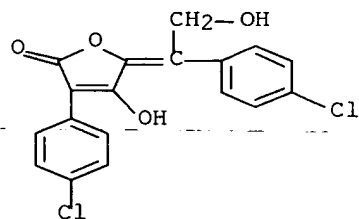
RN 53587-71-6 CAPLUS

CN 2(5H)-Furanone, 3-(3,4-dimethoxyphenyl)-5-[1-(3,4-dimethoxyphenyl)-2-hydroxyethylidene]-4-hydroxy- (9CI) (CA INDEX NAME)



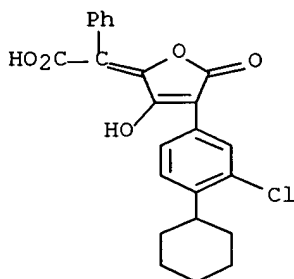
RN 53658-64-3 CAPLUS

CN 2(5H)-Furanone, 3-(4-chlorophenyl)-5-[1-(4-chlorophenyl)-2-hydroxyethylidene]-4-hydroxy- (9CI) (CA INDEX NAME)

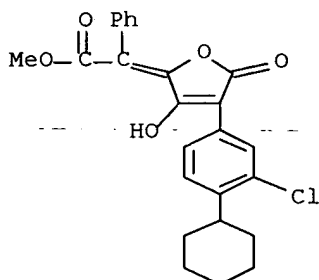


L9 ANSWER 134 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:505256 CAPLUS  
 DN 81:105256  
 TI 4-Cyclohexylvulpinic acid derivatives in the treatment of arthritis  
 IN Sutton, Blaine M.  
 PA Smithkline Corp.  
 SO U.S., 4 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3821397	A	19740628	US 1973-357762	19730507
	US 3752829	A	19730814	US 1972-282534	19720821
PRAI	US 1971-188439		19711013		
	US 1972-282534		19720821		
GI	For diagram(s), see printed CA Issue.				
AB	PhCH <sub>2</sub> CN was treated with EtO <sub>2</sub> CCO <sub>2</sub> Et and the resulting PhCH(CN)COCO <sub>2</sub> Et treated with 3-chloro-4-cyclohexylphenylacetonitrile and the product cyclized with HOAc to give 3'-chloro-4'-cyclohexylpulvinic acid, which was cyclized and the resulting 3'-chloro-4'-cyclohexylpulvinic acid lactone cleaved with HCl to give the vulpinic oxides I and II. I and II are antiarthritic at 16 mg/kg in rats.				
IT	<b>50548-54-4P</b>				
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. and cyclization of) .				
RN	50548-54-4 CAPLUS				
CN	Benzenecetic acid, .alpha.-[4-(3-chloro-4-cyclohexylphenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]- (9CI) (CA INDEX NAME)				

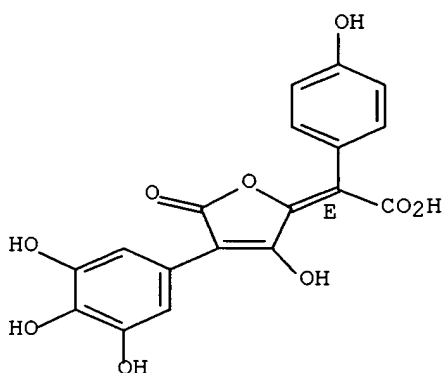


IT **50548-56-6P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 50548-56-6 CAPLUS  
 CN Benzenecetic acid, .alpha.-[4-(3-chloro-4-cyclohexylphenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 135 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:460799 CAPLUS  
 DN 81:60799  
 TI Pigments of fungi. XIX. Structural determination of pulvinic acids by NMR spectroscopy  
 AU Steglich, Wolfgang; Besl, Helmut; Zipfel, Klaus  
 CS Org.-Chem. Inst., Tech. Univ. Berlin, Berlin, Fed. Rep. Ger.  
 SO Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische Chemie, Biochemie, Biophysik, Biologie (1974), 29(1-2), 96-8  
 CODEN: ZENBAX; ISSN: 0044-3174  
 DT Journal  
 LA German  
 GI For diagram(s), see printed CA Issue.  
 AB The structures of the pulvinic acid derivs. xerocomic acid (I, R = R1 = R4 = OH, R2 = R3 = H), of Xerocomus chrysenteron and Gomphidius glutinosus, isoxerocomic acid (I, R1 = R3 = R4 = OH, R2 = H) and of gomphidic acid (I, R = R1 = R2 = R4 = OH, R3 = H) of G. glutinosus were elucidated by NMR spectra, which showed large differences in the chem. shifts of the 2,6 and 2',6' arom. protons.  
 IT **25328-77-2**  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
 (of Gomphidius glutinosus)  
 RN 25328-77-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trihydroxyphenyl)-2(5H)-furanlydene]-, (.alpha.E)- (9CI) (CA INDEX NAME)

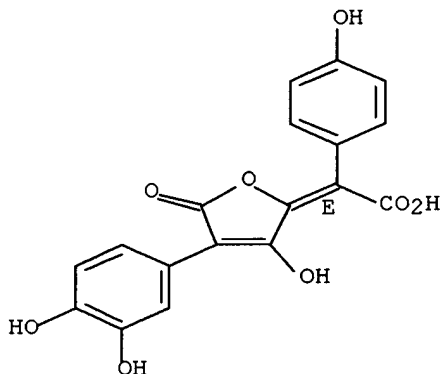
Double bond geometry as shown.



IT **25287-88-1**  
 RL:--BIOL--(Biological study)--  
 (of Gomphidius glutinosus and Xerocomus chrysenteron, as structure  
 for  
 xerocomic acid)  
 RN 25287-88-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-

furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

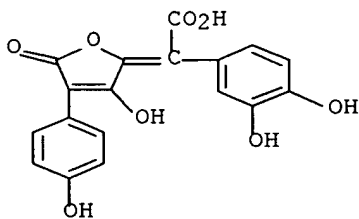


IT 27711-61-1

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)  
(of *Xerocomus chrysenteron*)

RN 27711-61-1 CAPLUS

CN Benzeneacetic acid, 3,4-dihydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)

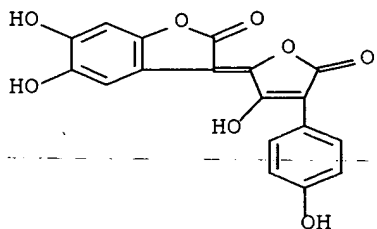


IT 50422-97-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

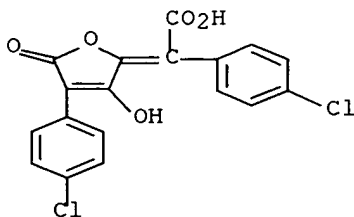
RN 50422-97-4 CAPLUS

CN 2(3H)-Benzofuranone, 5,6-dihydroxy-3-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



L9 ANSWER 136 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:133047 CAPLUS  
 DN 80:133047  
 TI Substituted 2,5-diphenyl-3,4,6-trihydroxy-.DELTA.2,4-hexadienoic acid  
 lactones (1,4)  
 IN Sutton, Blaine M.  
 PA Smith Kline French Laboratories  
 SO U.S., 3 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

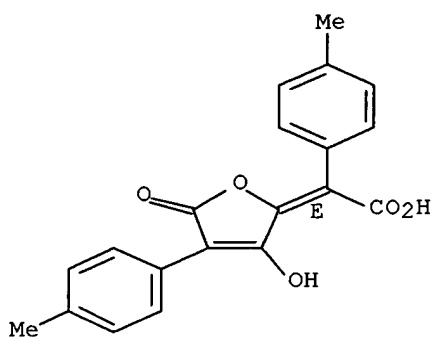
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3772341	A	19731113	US 1971-148890	19710601
PRAI	US 1971-148890		19710601		
GI	For diagram(s), see printed CA Issue.				
AB	The title compds. (I; R,R1 = H, Me MeO, CF3, halo) having antiarthritic activity at 25 mg/kg-day in rats were prepd. by diborane redn. of pulvinic acid derivs. Thus, a mixt. of PhCH2CN and Et oxalate was refluxed in NaOEt soln. to give PhCH(CN)COCO2Et, which was refluxed with PhCH2CN in NaOEt soln. to give 2,5-diphenyl-3,4-dioxoadiponitrile (II). A mixt. of II in H2O, HOAc, and concd. H2SO4 was refluxed 1 hr to give pulvinic acid, which was reduced with B2H6 in THF to give the lactone (I; R = R1 = H). Similarly prepd. were 7 I including a trimethoxyphenyl deriv.				
IT	<b>38747-01-2P 38747-07-8P 38747-10-3P</b> <b>50688-97-6P 50689-03-7P 50689-08-2P</b>				
RL:	RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);				
RACT	(Reactant or reagent) (prepn. and redn. of)				
RN	38747-01-2 CAPLUS				
CN	Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)				



RN 38747-07-8 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

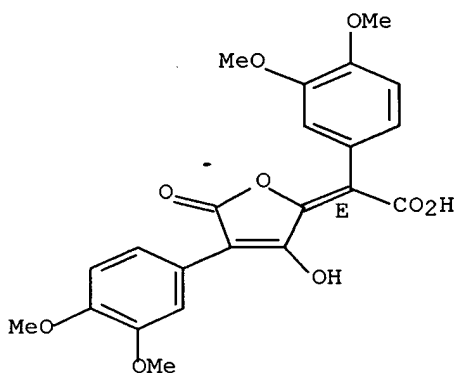
Double bond geometry as shown.



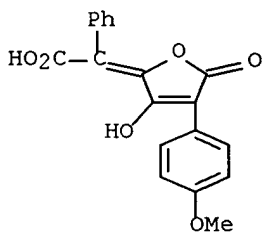


RN 38747-10-3 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dimethoxy-, (E)- (9CI) (CA INDEX NAME)

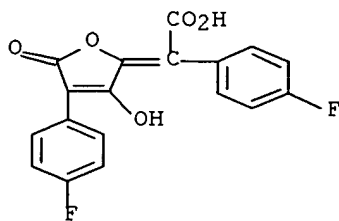
Double bond geometry as shown.



RN 50688-97-6 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)

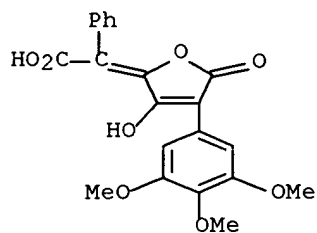


RN 50689-03-7 CAPLUS  
 CN Benzeneacetic acid, 4-fluoro-.alpha.-[4-(4-fluorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)

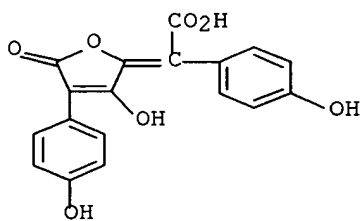


RN 50689-08-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



L9 ANSWER 137 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:118217 CAPLUS  
 DN 80:118217  
 TI Gyroporin and atromentin acid from *Leccinum aurantiacum* cultures  
 AU Bresinsky, Andreas; Besl, Helmut; Steglich, Wolfgang  
 CS Bot. Staatssammlung Muenchen, Munich, Fed. Rep. Ger.  
 SO Phytochemistry (Elsevier) (1974), 13(1), 271-2  
 CODEN: PYTCAS; ISSN: 0031-9422  
 DT Journal  
 LA German  
 AB Atromentin acid and gyroporin were isolated from *L. aurantiacum* by chromatog. on acetylated Polyamide.  
 IT **521-56-2**  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
 (of *Leccinum aurantiacum*)  
 RN 521-56-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]- (9CI) (CA INDEX NAME)

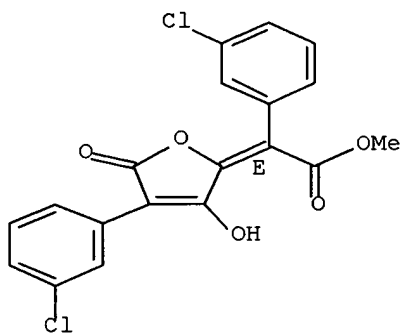


L9 ANSWER 138 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:95715 CAPLUS  
 DN 80:95715  
 TI 2-[m-Chloro-.alpha.-(methoxycarbonyl)benzylidene]-4-(m-chlorophenyl)-3-hydroxy-5-oxo-2,5-dihydrofuran  
 IN Foden, Frederick R.; McCormick, John; O'Mant, Derrick M.  
 PA Imperial Chemical Industries Ltd.  
 SO Brit., 2 pp.  
 CODEN: BRXXAA  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1341053	A	19731219	GB 1971-16871	19720330
PRAI	GB 1971-16871		19720330		

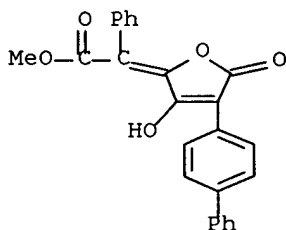
AB Refluxing 3,4-dioxo-2,5-bis(m-chlorophenyl)adiponitrile 5 hr in MeOH contg. H2SO4 gave the title compd. which had antiinflammatory, analgesic, and antipyretic activity.  
 IT **32883-73-1P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 32883-73-1 CAPLUS  
 CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME) .

Double bond geometry as shown.

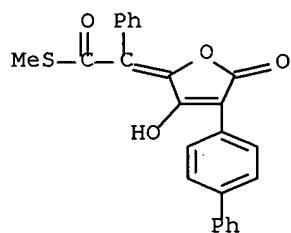
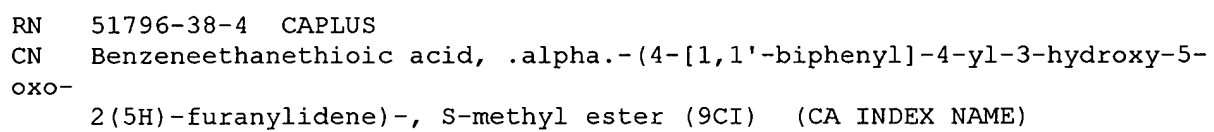


L9 ANSWER 139 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:95710 CAPLUS  
 DN 80:95710  
 TI Thiopulvinic acid derivatives  
 IN Weinstock, Joseph  
 PA Smithkline Corp.  
 SO U.S., 4 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3780064	A	19731218	US 1972-267762	19720630
	US 3852462	A	19741203	US 1973-393236	19730830
PRAI	US 1972-267762		19720630		
GI	For diagram(s), see printed CA Issue.				
AB	The thiopulvinic acids I (R = Me, Ph, PhCH <sub>2</sub> , R <sub>1</sub> = R <sub>2</sub> = H; R = Me, R <sub>1</sub> = R <sub>2</sub> = Cl; R = Me, R <sub>1</sub> = Ph, R <sub>2</sub> = H) were prepd. Thus, PhCH <sub>2</sub> CN was treated with EtO <sub>2</sub> CCO <sub>2</sub> Et and the resulting PhCH(CN)COCO <sub>2</sub> Et treated with PhCH <sub>2</sub> CN to give PhCH(CN)COCOCH(CN)Ph, which was treated with HOAc and the resulting pulvinic acid cyclized to give pulvinic acid lactone. The lactone and MeSH gave I (R = Me, R <sub>1</sub> = R <sub>2</sub> = H). At 25 mg/kg I inhibited adjuvant arthritis in rats induced by Mycobacterium butyricum. .				
IT	<b>51780-78-0P 51796-37-3P 51796-38-4P</b>				
	RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)				
RN	51780-78-0 CAPLUS				
CN	Benzeneacetic acid, .alpha.-(4-[1,1'-biphenyl]-4-yl-3-hydroxy-5-oxo-2(5H)-furanylidene)-, methyl ester (9CI) (CA INDEX NAME)				



RN 51796-37-3 CAPLUS  
 CN Benzeneethanethioic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, S-methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 140 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:82624 CAPLUS  
 DN 80:82624  
 TI Phenylvulpinic acid derivatives  
 IN Sutton, Blaine M.  
 PA Smithkline Corp.  
 SO U.S., 4 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3780065	A	19731218	US 1972-279597	19720810
	US 3896234	A	19750722	US 1973-393235	19730830
PRAI	US 1971-188555		19711013		
	US 1972-279597		19720810		

GI For diagram(s), see printed CA Issue.

AB Antiinflammatory 4-phenylvulpinic acid (I, R = H) was prepd. by treating PhCH<sub>2</sub>CN with (CO<sub>2</sub>Et)<sub>2</sub> and treating the PhCH(CN)COCO<sub>2</sub>Et with p-PhC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CN

to give PhCH(CN)COCOCH(CN)C<sub>6</sub>H<sub>4</sub>Ph-p. Acid cyclization yielded 4'-phenylpulvinic acid and then its lactone, which was cleaved with base and esterified with MeOH to give I (R = H). Treatment of I (R = H) with acid chlorides gave I (R = CH<sub>2</sub>:CHCO, CH<sub>2</sub>:CMeCO, Me<sub>2</sub>C:CHCO, MeCH:CHCO, PhCH:CHCO). 3-Phenylvulpinic acid was similarly prepd.

IT **51780-16-6P 51780-17-7P 51780-18-8P**

**51780-19-9P 51780-20-2P 51780-22-4P**

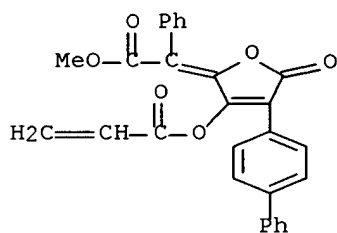
**51780-74-6P 51780-78-0P 51780-86-0P**

**51780-87-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

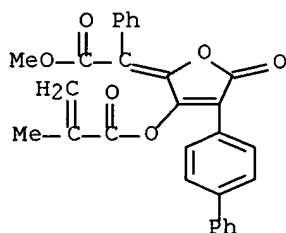
RN 51780-16-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-4-yl-5-oxo-3-[(1-oxo-2-propenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



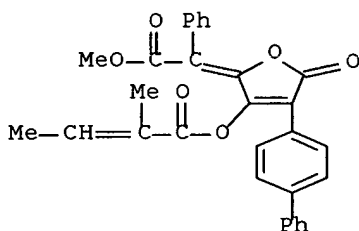
RN 51780-17-7 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-4-yl-3-[(2-methyl-1-oxo-propenyl)oxy]-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



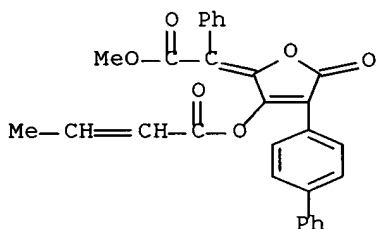
RN 51780-18-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-4-yl]-3-[(2-methyl-1-oxo-2-butenyl)oxy]-5-oxo-2-(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 51780-19-9 CAPLUS

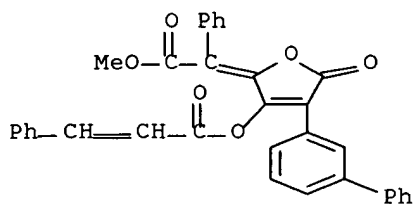
CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-4-yl]-5-oxo-3-[(1-oxo-2-butenyl)oxy]-2-(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 51780-20-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-3-yl]-5-oxo-4-[(1-oxo-3-phenyl-2-propenyl)oxy]-2-(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)

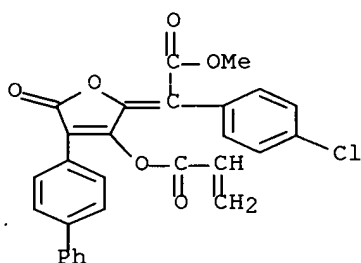




RN 51780-22-4 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-4-yl-5-oxo-3-[(1-oxo-2-propenyl)oxy]-2(5H)-furanylidene]-4-chloro-, methyl ester (9CI) (CA

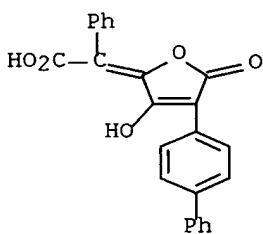
INDEX  
NAME)



RN 51780-74-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-4-yl-3-hydroxy-5-oxo-2(5H)-

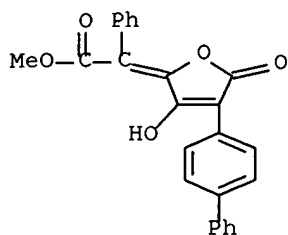
furanylidene)- (9CI) (CA INDEX NAME)



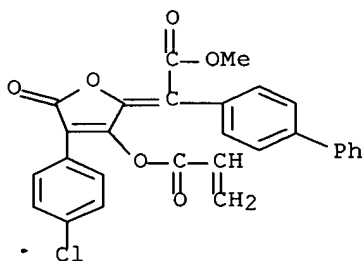
RN 51780-78-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-4-yl-3-hydroxy-5-oxo-2(5H)-

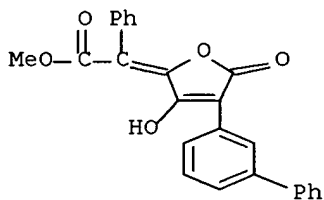
furanylidene)-, methyl ester (9CI) (CA INDEX NAME)



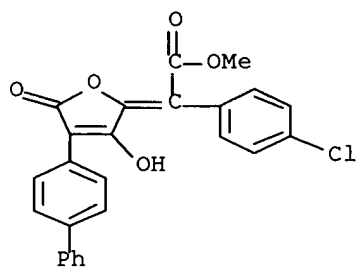
RN 51780-86-0 CAPLUS  
 CN [1,1'-Biphenyl]-4-acetic acid, .alpha.-[4-(4-chlorophenyl)-5-oxo-3-[(1-oxo-2-propenyl)oxy]-2(5H)-furan-4-ylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 51780-87-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-3-yl-3-hydroxy-5-oxo-2(5H)-furan-4-ylidene]-, methyl ester (9CI) (CA INDEX NAME)



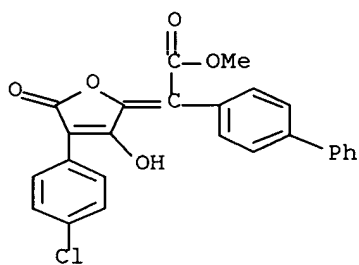
IT 51780-21-3 51780-85-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with acyl chlorides)  
 RN 51780-21-3 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-[1,1'-biphenyl]-4-yl-3-hydroxy-5-oxo-2(5H)-furan-4-ylidene]-4-chloro-, methyl ester (9CI) (CA INDEX NAME)



RN 51780-85-9 CAPLUS

CN [1,1'-Biphenyl]-4-acetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-

2(5H)-furan-2-ylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 141 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:47828 CAPLUS  
 DN 80:47828  
 TI 2-[.alpha.-(Methoxycarbonyl)benzylidene]-4-phenyl-3-hydroxy-5-oxo-2,5-dihydrofurans  
 IN Foden, Frederick R.; O'Mant, Derrick M.  
 PA Imperial Chemical Industries Ltd.  
 SO Brit., 3 pp.  
 CODEN: BRXXAA  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1335269	A	19731024	GB 1971-10038	19710420
	US 3818048	A	19740618	US 1972-236200	19720320
	DE 2219019	A	19721026	DE 1972-2219019	19720419
	FR 2157773	A1	19730608	FR 1972-13762	19720419
PRAI	GB 1971-10038		19710420		

GI For diagram(s), see printed CA Issue.

AB 3-(3,5-Dichlorophenyl)-6-phenyl-2,5-dioxo-2,5-dihydrofuro[3,2-b]furan with

NaOH-MeOH gave a mixt. of 2-[.alpha.-(methoxycarbonyl)benzylidene]-4-(3,5-dichlorophenyl)- (I, R = Cl, R1 = H) and 2-[3,5-dichloro-.alpha.-(methoxycarbonyl)-benzylidene]-4-phenyl-3-hydroxy-5-oxo-2,5-dihydrofuran (I, R = H, R1 = Cl). I have antiinflammatory activity.

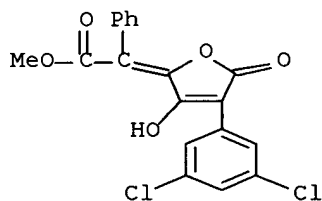
IT **39133-76-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

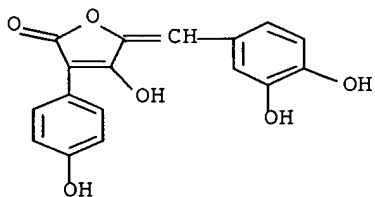
RN 39133-76-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,5-dichlorophenyl)-3-hydroxy-5-oxo-2(5H)-

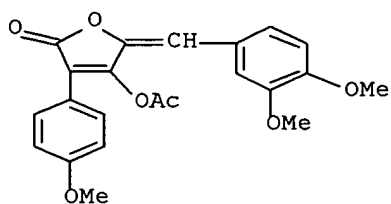
furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 142 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1974:27045 CAPLUS  
 DN 80:27045  
 TI Constituents of the higher fungi. XIV. 3',4,4'-Trihydroxypulvinone, thelephoric acid, and novel pyrandione and furanone pigments from *Suillus grevillei* (*Boletus elegans*)  
 AU Edward, Raymond L.; Gill, Melvyn  
 CS Sch. Chem., Univ. Bradford, Bradford, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1973), (18), 1921-9  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB The structures of 3',4,4'-trihydroxypulvinone (I) and the pigments (II and III), isolated from *S. grevillei*, were detd. from their chem. and spectral properties. The tetramethyl ether of I was prepd. from trimethoxypulvinic lactone. Thelephoric acid was identified as the cap skin pigment of *S. grevillei*.  
 IT **51282-12-3P**  
 RL: PREP (Preparation)  
 (from *Suillus grevillei*, mol. structure of)  
 RN 51282-12-3 CAPLUS  
 CN 2(5H)-Furanone, 5-[(3,4-dihydroxyphenyl)methylene]-4-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

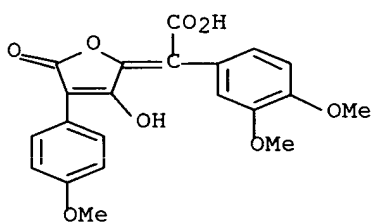


IT **51281-58-4P 51282-15-6P 51282-16-7P**  
**51282-17-8P 51282-18-9P 51282-19-0P**  
**51282-20-3P 51282-21-4P 51282-22-5P**  
**51282-23-6P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 51281-58-4 CAPLUS  
 CN 2(5H)-Furanone, 4-(acetyloxy)-5-[(3,4-dimethoxyphenyl)methylene]-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



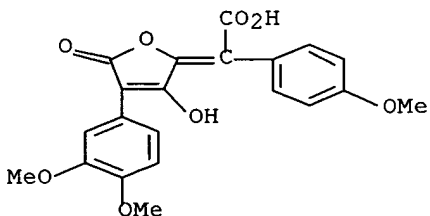
RN 51282-15-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanlydene]-3,4-dimethoxy- (9CI) (CA INDEX NAME)



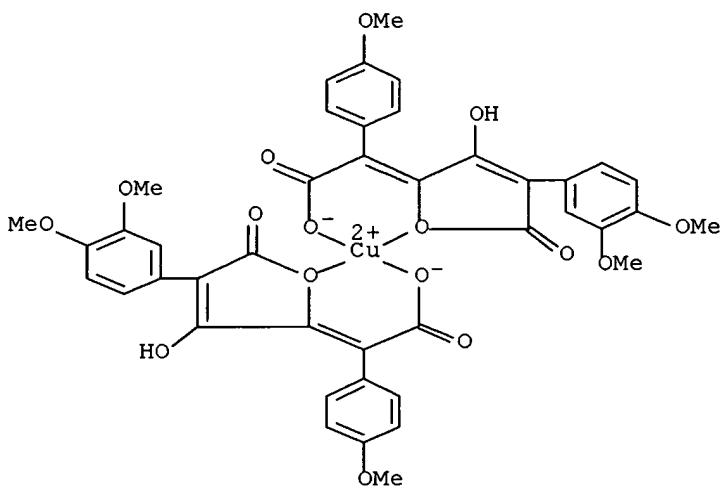
RN 51282-16-7 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-  
2(5H)-  
furanlydene]-4-methoxy- (9CI) (CA INDEX NAME)



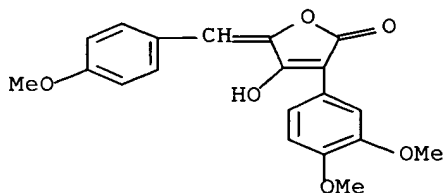
RN 51282-17-8 CAPLUS

CN Copper, bis[.alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
furanlydene]-4-methoxybenzeneacetato]- (9CI) (CA INDEX NAME)



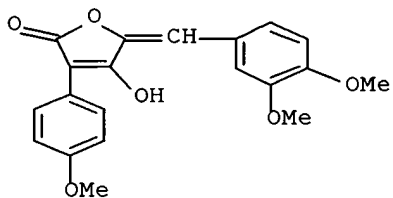
RN 51282-18-9 CAPLUS

CN 2(5H)-Furanone, 3-(3,4-dimethoxyphenyl)-4-hydroxy-5-[(4-methoxyphenyl)methylene]- (9CI) (CA INDEX NAME)



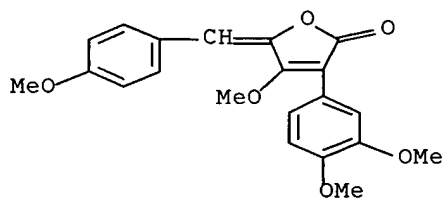
RN 51282-19-0 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dimethoxyphenyl)methylene]-4-hydroxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



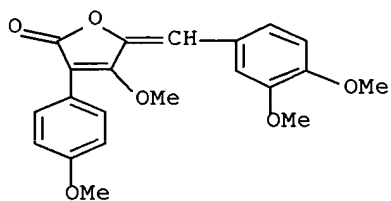
RN 51282-20-3 CAPLUS

CN 2(5H)-Furanone, 3-(3,4-dimethoxyphenyl)-4-methoxy-5-[(4-methoxyphenyl)methylene]- (9CI) (CA INDEX NAME)



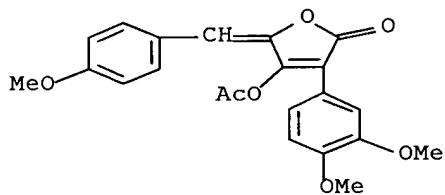
RN 51282-21-4 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dimethoxyphenyl)methylene]-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



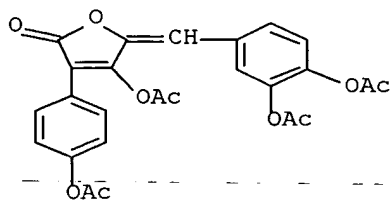
RN 51282-22-5 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-3-(3,4-dimethoxyphenyl)-5-[(4-methoxyphenyl)methylene]- (9CI) (CA INDEX NAME)



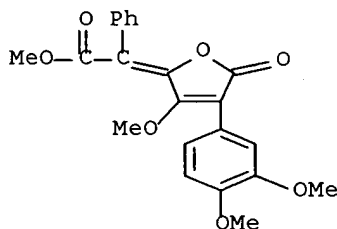
RN 51282-23-6 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-3-[4-(acetyloxy)phenyl]-5-[[3,4-bis(acetyloxy)phenyl]methylene]- (9CI) (CA INDEX NAME)

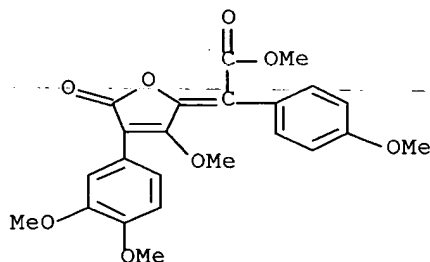




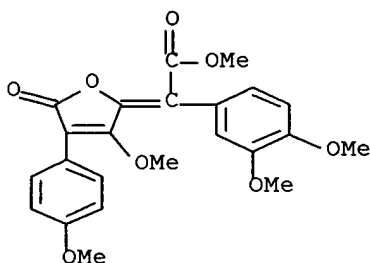
L9 ANSWER 143 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1973:536692 CAPLUS  
 DN 79:136692  
 TI Constituents of the higher fungi. XIII. 2-Aryl-3-methoxymaleic anhydrides from pulvinic acid derivatives. Convenient method for determination of structure of fungal and lichen pulvinic acid derivatives  
 AU Edwards, Raymond L.; Gill, Melvyn  
 CS Sch. Chem., Univ. Bradford, Bradford, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1973), (15), 1538-42  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB The pulvinic acid derivs. (I; R = R2 = R3 = OMe, R1 = H; R = R1 = R2 = OMe, R3 = H; R = R1 = H, R2 = R3 = OMe; R = R1 = OMe, R2 = R3 = H; R = R2 = H, R1 = R3 = OMe) with Ba(OH)2 gave the corresponding anhydrides (II) and 3,4-R3R2C6H3CH2CO2H.  
 IT **20916-10-3 49829-93-8 49829-95-0 49830-00-4**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrolysis of)  
 RN 20916-10-3 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-methoxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



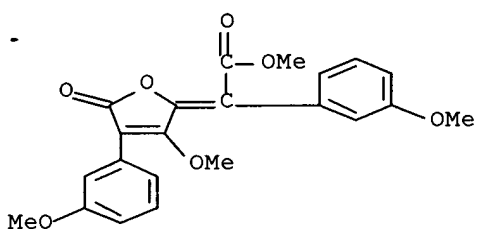
RN 49829-93-8 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-methoxy-5-oxo-2(5H)-furanylidene]-4-methoxy-, methyl ester (9CI) (CA INDEX NAME)



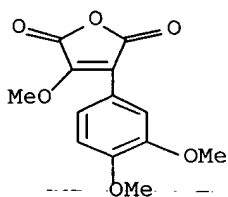
RN 49829-95-0 CAPLUS  
 CN Benzeneacetic acid, 3,4-dimethoxy-.alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



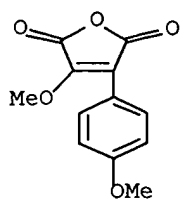
RN 49830-00-4 CAPLUS  
 CN Benzeneacetic acid, 3-methoxy-.alpha.-[3-methoxy-4-(3-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



IT **49829-94-9P 49829-96-1P 49830-01-5P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 49829-94-9 CAPLUS  
 CN 2,5-Furandione, 3-(3,4-dimethoxyphenyl)-4-methoxy- (9CI) (CA INDEX NAME)

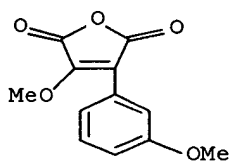


RN 49829-96-1 CAPLUS  
 CN 2,5-Furandione, 3-methoxy-4-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



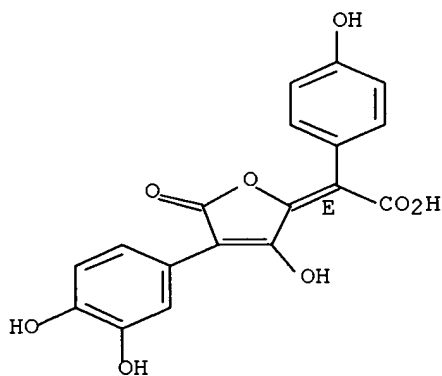
RN 49830-01-5 CAPLUS

CN 2,5-Furandione, 3-methoxy-4-(3-methoxyphenyl)- (9CI) (CA INDEX NAME)

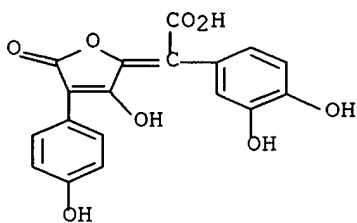


L9 ANSWER 144 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1973:536687 CAPLUS  
 DN 79:136687  
 TI Constituents of the higher fungi. XII. Identification of involutin as  
 (-)-cis-5-(3,4-dihydroxyphenyl)-3,4-dihydroxy-2-(4-  
 hydroxyphenyl)cyclopent-  
 2-enone and synthesis of (+)-cis-involutin trimethyl ether from  
 isoxerocomic acid derivatives  
 AU Edwards, Raymond L.; Gill, Melvyn  
 CS Sch. Chem., Univ. Bradford, Bradford, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and  
 Bio-Organic Chemistry (1972-1999) (1973), (15), 1529-37  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB The structure of involutin (I, R = H) was detd. by the prepn. of its  
 (.+-.)-trimethyl ether (I, R = Me) in 6 steps from 4-  
 MeOC6H4CH(CN)COCO2Et  
 and 3,4-(MeO)2C6H3CH2CN.  
 IT 25287-88-1P 27711-61-1P 49829-93-8P  
 49829-95-0P 50422-85-0P 50422-86-1P  
 50422-97-4P 50422-98-5P 50422-99-6P  
 50423-01-3P 50423-02-4P 50423-03-5P  
 50423-04-6P 50423-05-7P 50423-06-8P  
 50423-07-9P 50423-08-0P 50423-09-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 25287-88-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-  
 2(5H)-  
 furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

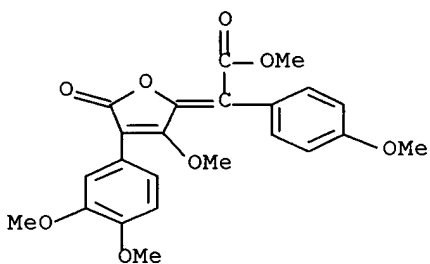
Double bond geometry as shown.



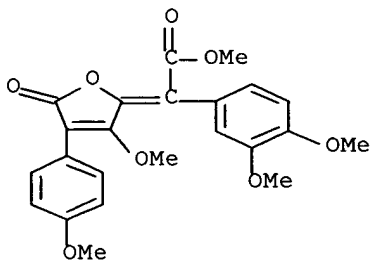
---RN---27711-61-1 CAPLUS---  
 CN Benzeneacetic acid, 3,4-dihydroxy-.alpha.-[3-hydroxy-4-(4-  
 hydroxyphenyl)-5-  
 oxo-2(5H)-furan-2-ylidene]- (9CI) (CA INDEX NAME)



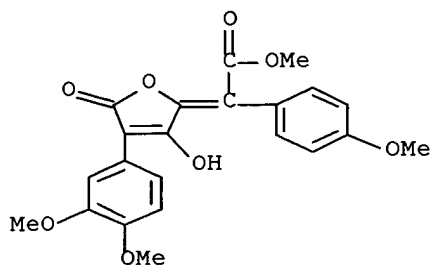
RN 49829-93-8 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-methoxy-5-oxo-2(5H)-  
 furanylidene]-4-methoxy-, methyl ester (9CI) (CA INDEX NAME)



RN 49829-95-0 CAPLUS  
 CN Benzeneacetic acid, 3,4-dimethoxy-.alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)

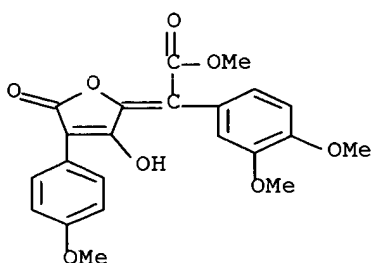


RN 50422-85-0 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-4-methoxy-, methyl ester (9CI) (CA INDEX NAME)



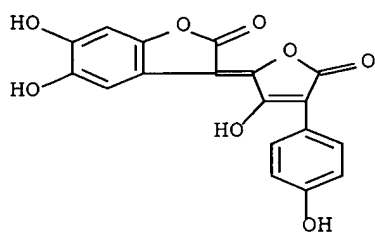
RN 50422-86-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-3,4-dimethoxy-, methyl ester (9CI) (CA INDEX NAME)



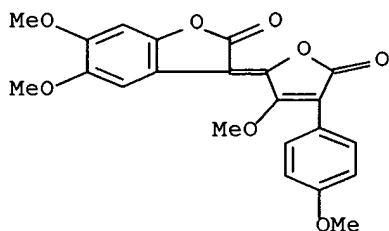
RN 50422-97-4 CAPLUS

CN 2(3H)-Benzofuranone, 5,6-dihydroxy-3-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



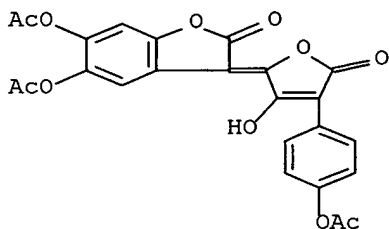
RN 50422-98-5 CAPLUS

CN 2(3H)-Benzofuranone, 5,6-dimethoxy-3-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



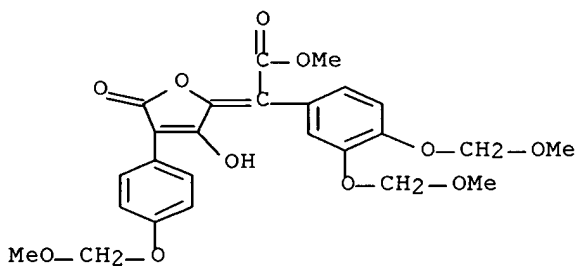
RN 50422-99-6 CAPLUS

CN 2(3H)-Benzofuranone, 5,6-bis(acetyloxy)-3-[4-[4-(acetyloxy)phenyl]-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



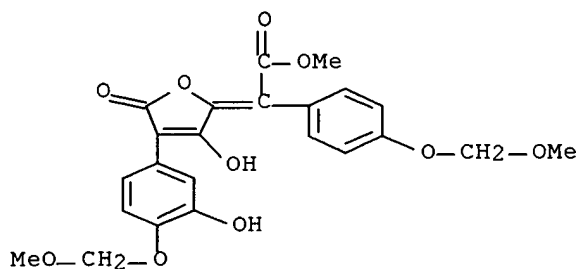
RN 50423-01-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-[4-(methoxymethoxy)phenyl]-5-oxo-2(5H)-furanylidene]-3,4-bis(methoxymethoxy)-, methyl ester (9CI) (CA INDEX NAME)

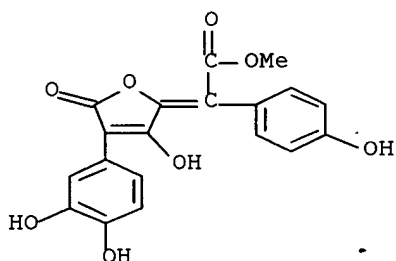


RN 50423-02-4 CAPLUS

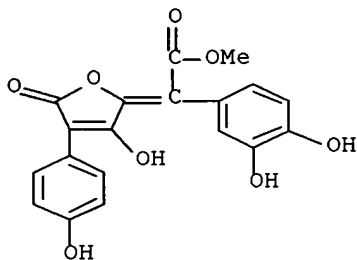
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-[3-hydroxy-4-(methoxymethoxy)phenyl]-5-oxo-2(5H)-furanylidene]-4-(methoxymethoxy)-, methyl ester (9CI) (CA INDEX NAME)



RN 50423-03-5 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-4-hydroxy-, methyl ester (9CI) (CA INDEX NAME)

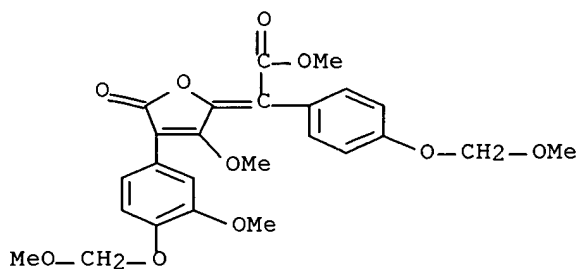


RN 50423-04-6 CAPLUS  
 CN Benzeneacetic acid, 3,4-dihydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanlydene]-, methyl ester (9CI) (CA INDEX NAME)



RN 50423-05-7 CAPLUS  
 CN Benzeneacetic acid, 4-(methoxymethoxy)-.alpha.-[3-methoxy-4-[3-methoxy-4-(methoxymethoxy)phenyl]-5-oxo-2(5H)-furanlydene]-, methyl ester (9CI)  
 (CA INDEX NAME)



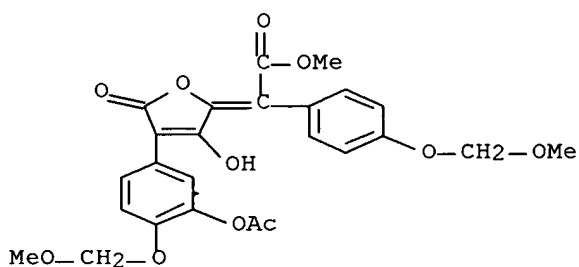


RN 50423-06-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-[3-(acetyloxy)-4-(methoxymethoxy)phenyl]-3-

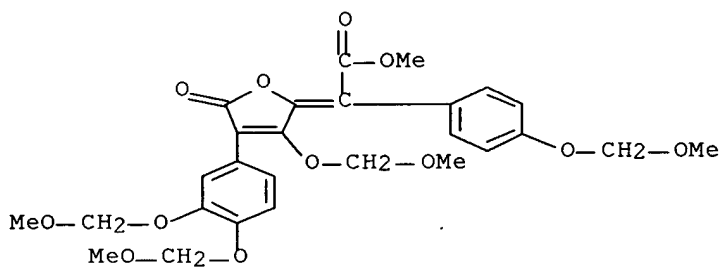
hydroxy-5-oxo-2(5H)-furanylidene]-4-(methoxymethoxy)-, methyl ester (9CI)

(CA INDEX NAME)



RN 50423-07-9 CAPLUS

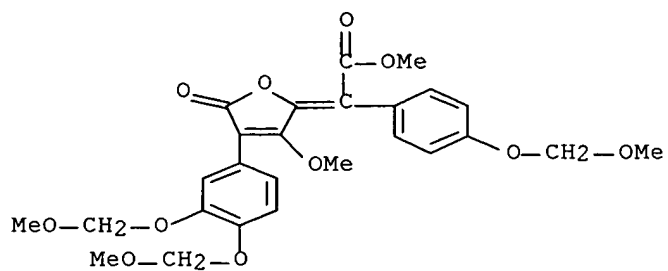
CN Benzeneacetic acid, .alpha.-[4-[3,4-bis(methoxymethoxy)phenyl]-3-(methoxymethoxy)-5-oxo-2(5H)-furanylidene]-4-(methoxymethoxy)-, methyl ester (9CI) (CA INDEX NAME)



RN 50423-08-0 CAPLUS

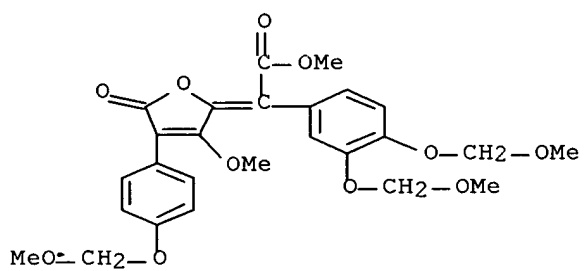
CN Benzeneacetic acid, .alpha.-[4-[3,4-bis(methoxymethoxy)phenyl]-3-methoxy-5-

oxo-2(5H)-furanylidene]-4-(methoxymethoxy)-, methyl ester (9CI) (CA INDEX NAME)



RN 50423-09-1 CAPLUS

CN Benzeneacetic acid, 3,4-bis(methoxymethoxy)-.alpha.-[3-methoxy-4-[4-(methoxymethoxy)phenyl]-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester (9CI)  
(CA INDEX NAME)

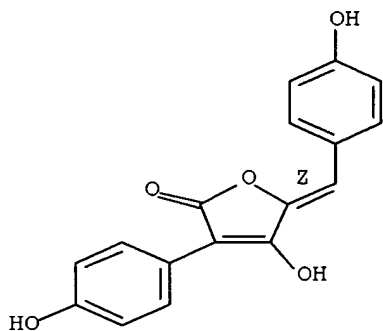


L9 ANSWER 145 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1973:534180 CAPLUS  
 DN 79:134180  
 TI New butenolides from *Aspergillus terreus*  
 AU Ojima, Nobutoshi; Takenaka, Shunsuke; Seto, Shuichi  
 CS Chem. Res. Inst. Non-Aqueous Solutions, Tohoku Univ., Sendai, Japan  
 SO Phytochemistry (Elsevier) (1973), 12(10), 2527-9  
 CODEN: PYTCAS; ISSN: 0031-9422  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB From the culture filtrate of *A. terreus*, 7 related yellow substances were

isolated. The simplest was 3-(p-hydroxyphenyl)-4-hydroxy-5-(p-hydroxybenzylidene)-2(5H)-furanone(I).

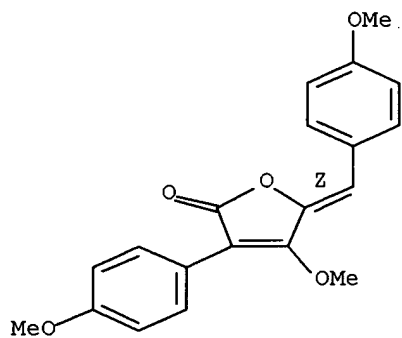
IT **49637-60-7**  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
 BIOL (Biological study); OCCU (Occurrence)  
 (of *Aspergillus terreus*)  
 RN 49637-60-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-[(4-hydroxyphenyl)methylene]-, (5Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



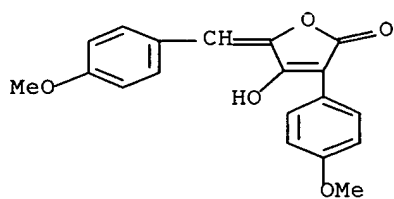
IT **49637-61-8P 49637-64-1P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 49637-61-8 CAPLUS  
 CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methylene]-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 49637-64-1 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methylene]- (9CI) (CA INDEX NAME)



L9 ANSWER 146 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1973:515428 CAPLUS  
 DN 79:115428  
 TI 4-Cyclohexylvulpinic acid derivatives  
 IN Sutton, Blaine M.  
 PA Smith Kline and French Laboratories  
 SO U.S., 3 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3752829	A	19730814	US 1972-282534	19720821
	US 3821397	A	19740628	US 1973-357762	19730507
PRAI	US 1971-188439		19711013		
	US 1972-282534		19720821		

GI For diagram(s), see printed CA Issue.

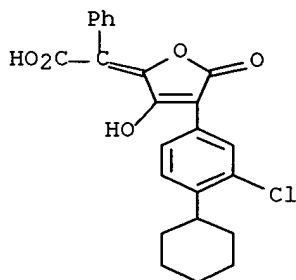
AB PhCH<sub>2</sub>CN was treated with (CO<sub>2</sub>Et)<sub>2</sub> and the resulting Et 2-cyano-3-phenylpyruvate treated with 3-chloro-4-cyclohexylphenylacetone to give 2-(3-chloro-4-cyclohexylphenyl)-5-phenyl-3,4-dioxoadiponitrile, which with H<sub>2</sub>O, HOAc, and concd. H<sub>2</sub>SO<sub>4</sub> gave 3'-chloro-4'-cyclohexylvulpinic acid. The acid was converted to 3'-chloro-4'-cyclohexylvulpinic acid lactone, which with HCl in MeOH gave 3'-chloro-4'-cyclohexylvulpinic acid (I) and 3-chloro-4-cyclohexylvulpinic acid (II). At 16 mg/kg (oral, rat) the Me esters of I and II inhibited development of adjuvant arthritis.

IT 50548-54-4P 50548-56-6P

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

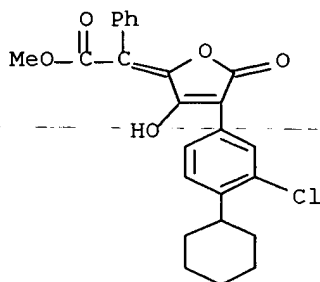
RN 50548-54-4 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3-chloro-4-cyclohexylphenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]- (9CI) (CA INDEX NAME)



RN 50548-56-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3-chloro-4-cyclohexylphenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 147 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1973:491979 CAPLUS  
 DN 79:91979  
 TI .alpha.,.beta.-Unsaturated esters of vulpinic acid  
 IN Sutton, Blain M.  
 PA Smith Kline and French Laboratories  
 SO U.S., 4 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3749740	A	19730731	US 1972-276020	19720728
	US 3865947	A	19750211	US 1973-357982	19730507
PRAI	US 1971-150209		19710604		
	US 1972-276020		19720728		

GI For diagram(s), see printed CA Issue.

AB Vulpinic acid esters (I, R = CH<sub>2</sub>:CHCO, CH<sub>2</sub>:CHMeCO, MeCH:CHCO, Me<sub>2</sub>C:CHCO, PhCH:CHCO; R<sub>1</sub>, R<sub>2</sub> = e.g., H, Cl, MeO, Me), useful for treating arthritis were prepd. Thus, PhCH<sub>2</sub>CN was treated with (CO<sub>2</sub>Et)<sub>2</sub> to give

[PhCH(CN)CO]<sub>2</sub>

which on reaction with Ac<sub>2</sub>O followed by refluxing in MeOH/HCl gave vulpinic acid. Acylation of this with CH<sub>2</sub>:CHCOCl gave I (R = CH<sub>2</sub>:CHCO,

R<sub>1</sub> = R<sub>2</sub> = H).

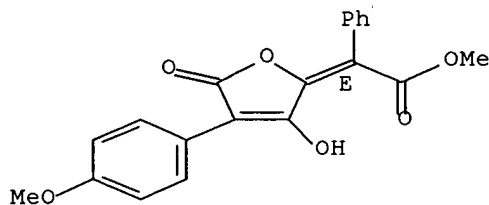
IT **481-64-1P 37542-22-6P 37542-24-8P**  
**37542-25-9P 38731-08-7P 38746-88-2P**  
**38746-90-6P 38747-01-2P 38747-07-8P**  
**50688-95-4P 50688-97-6P 50688-98-7P**  
**50689-00-4P 50689-03-7P 50689-05-9P**  
**50689-08-2P 50689-09-3P 50689-11-7P**  
**50689-12-8P 50689-14-0P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

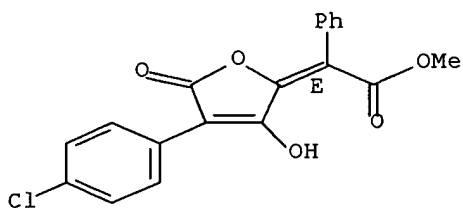
Double bond geometry as shown.



RN 37542-22-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

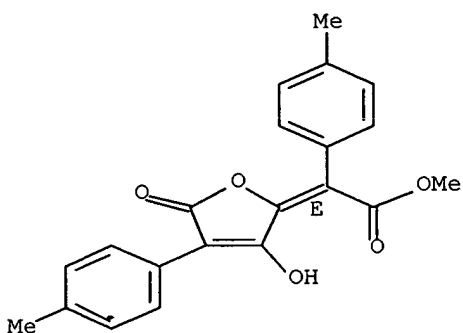
Double bond geometry as shown.



RN 37542-24-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

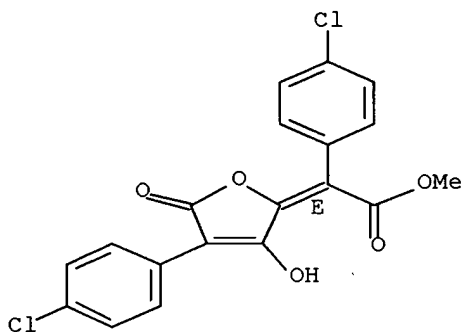
Double bond geometry as shown.



RN 37542-25-9 CAPLUS

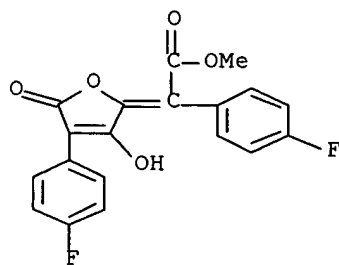
CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 38731-08-7 CAPLUS

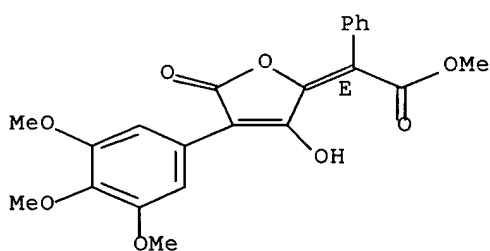
CN Benzeneacetic acid, 4-fluoro-.alpha.-[4-(4-fluorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 38746-88-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

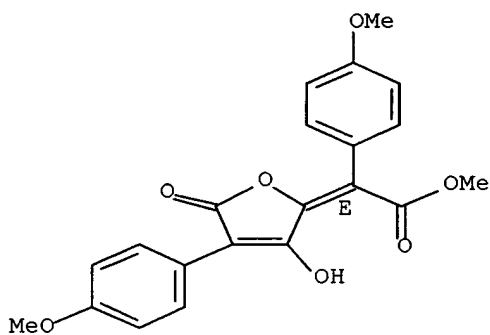
Double bond geometry as shown.



RN 38746-90-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-4-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

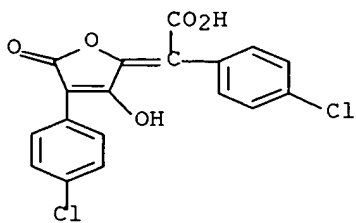
Double bond geometry as shown.



RN 38747-01-2 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)

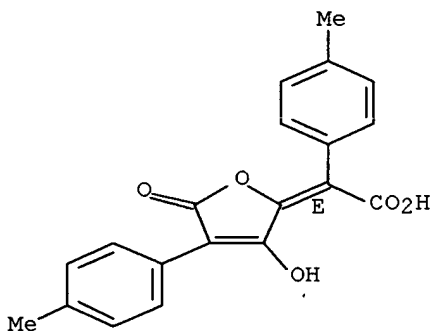




RN 38747-07-8 CAPLUS

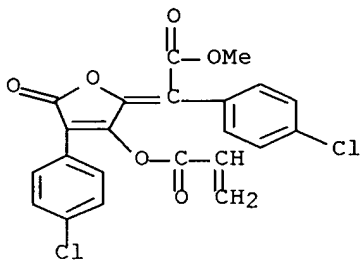
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



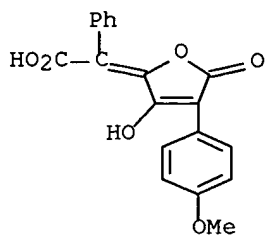
RN 50688-95-4 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-5-oxo-3-[(1-oxo-2-propenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



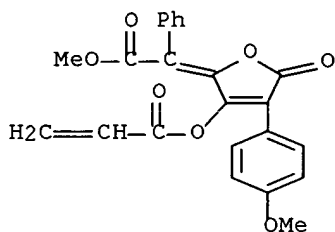
RN 50688-97-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



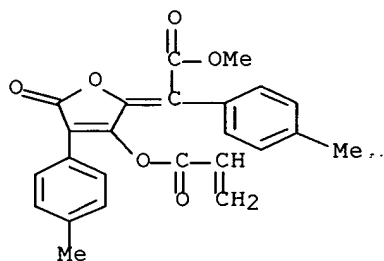
RN 50688-98-7 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-methoxyphenyl)-5-oxo-3-[(1-oxo-2-propenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



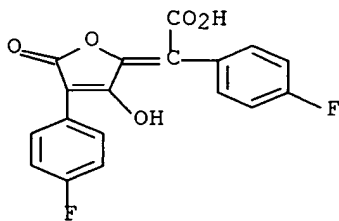
RN 50689-00-4 CAPLUS

CN Benzeneacetic acid, 4-methyl-.alpha.-[4-(4-methylphenyl)-5-oxo-3-[(1-oxo-2-propenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 50689-03-7 CAPLUS

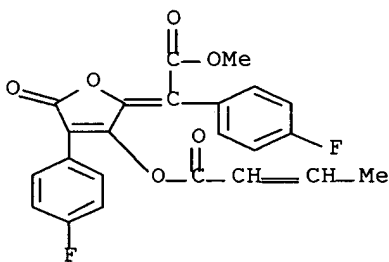
CN Benzeneacetic acid, 4-fluoro-.alpha.-[4-(4-fluorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



RN 50689-05-9 CAPLUS

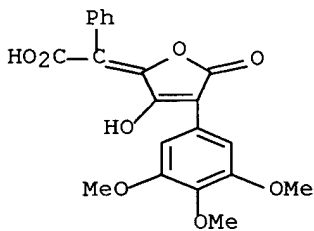
CN Benzeneacetic acid, 4-fluoro-.alpha.-[4-(4-fluorophenyl)-5-oxo-3-[(1-oxo-2-

butenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



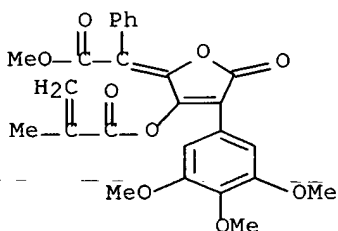
RN 50689-08-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



RN 50689-09-3 CAPLUS

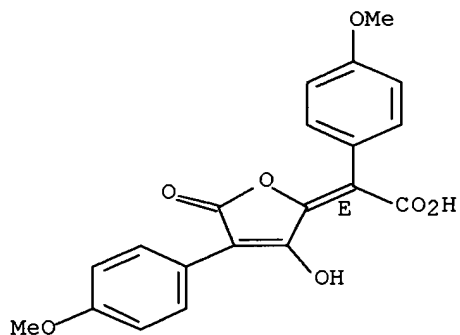
CN Benzeneacetic acid, .alpha.-[3-[(2-methyl-1-oxo-2-propenyl)oxy]-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 50689-11-7 CAPLUS

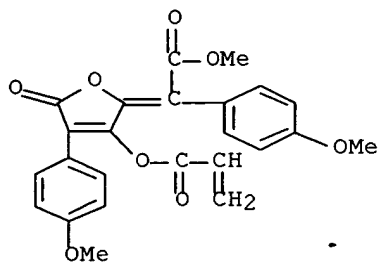
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-4-methoxy-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



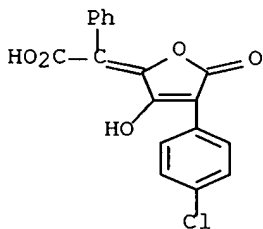
RN 50689-12-8 CAPLUS

CN Benzeneacetic acid, 4-methoxy-.alpha.-[4-(4-methoxyphenyl)-5-oxo-3-[(1-oxo-2-propenyl)oxy]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 50689-14-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



L9 ANSWER 148 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1973:71892 CAPLUS  
 DN 78:71892  
 TI Antiarthritic pulvinic acid esters  
 IN Sutton, Blaine Mote; Walz, Donald Thomas; Wilson, James William  
 PA Smith Kline and French Laboratories  
 SO Fr. Demande, 22 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2116455	A5	19720713	FR 1971-43056	19711201
	FR 2116455	B1	19751010		
	CA 959498	A1	19741217	CA 1971-127883	19711117
	ZA 7107760	A	19720830	ZA 1971-7760	19711118
	BE 775871	A1	19720526	BE 1971-110944	19711126
	AU 7136445	A1	19730607	AU 1971-36445	19711202
	GB 1327644	A	19730822	GB 1971-55986	19711202
	CA 988851	A2	19760511	CA 1974-196994	19740408

PRAI US 1970-94974 19701203  
 CA 1971-127883 19711117

GI For diagram(s), see printed CA Issue.

AB Pulvinates I (R and R1 = H, 3-Cl, 4-Cl, 3,4-Cl2, 4-Me, 2-OMe, 3-OMe, 4-OMe, 3,4-(OMe)2, 3,4,5-(OMe)3, 4-SMe, 4-SOMe, 4-OEt, 4-OBu, 3,4-OCH2O, 4-Br, 4-F, 3-CF3) were prepd. by treating RC6H4CH2N with EtO2CCO2Et to give RC6H4CH(CN)COCO2Et, which with R1C6H4CH2CN gave RC6H4CH(CN)COCOCH(CN)C6H4R1 (II). Acid cyclization of II with Ac2O gave the pulvinic acid lactone, which on acid hydrolysis with MeOH-HCl gave

I.  
 I at 1-50 mg/kg inhibited Mycobacterium butyricum-induced polyarthrititis in rats.

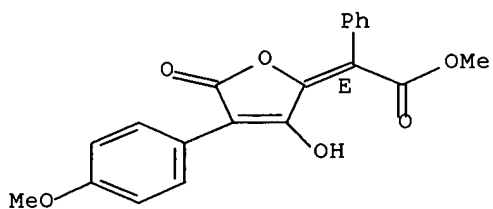
IT **481-64-1P 27394-71-4P 32883-73-1P**  
**37542-21-5P 37542-22-6P 37542-24-8P**  
**37542-25-9P 38731-08-7P 38746-76-8P**  
**38746-78-0P 38746-79-1P 38746-80-4P**  
**38746-82-6P 38746-84-8P 38746-86-0P**  
**38746-88-2P 38746-89-3P 38746-90-6P**  
**38746-91-7P 38747-07-8P 38747-10-3P**  
**38747-14-7P 39991-91-8P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

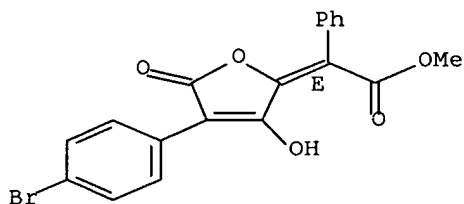
Double bond geometry as shown.



RN 27394-71-4 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-bromophenyl)-3-hydroxy-5-oxo-2(5H)-furanlylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

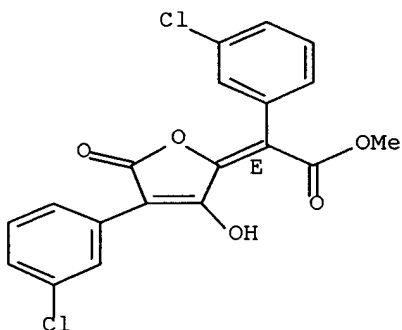
Double bond geometry as shown.



RN 32883-73-1 CAPLUS

CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanlylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

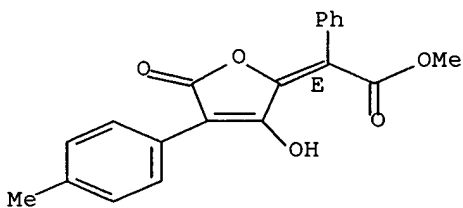
Double bond geometry as shown.



RN 37542-21-5 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanlylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

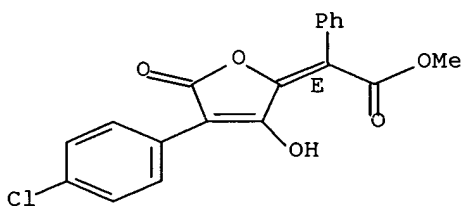
Double bond geometry as shown.



RN 37542-22-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-5-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

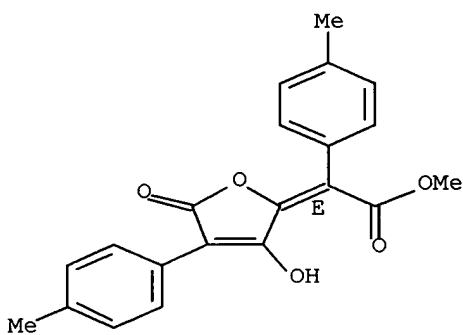
Double bond geometry as shown.



RN 37542-24-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furan-5-ylidene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

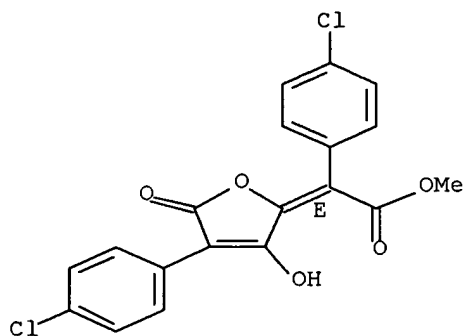
Double bond geometry as shown.



RN 37542-25-9 CAPLUS

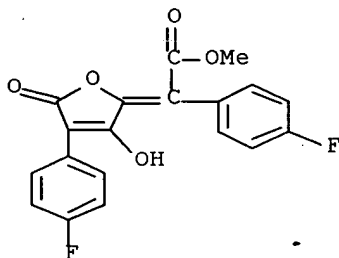
CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-5-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 38731-08-7 CAPLUS

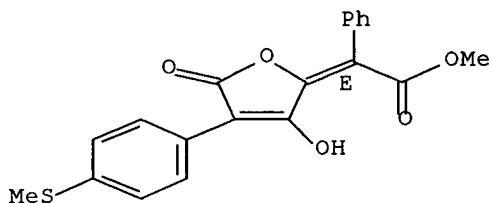
CN Benzeneacetic acid, 4-fluoro-.alpha.-[4-(4-fluorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 38746-76-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-[4-(methylthio)phenyl]-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

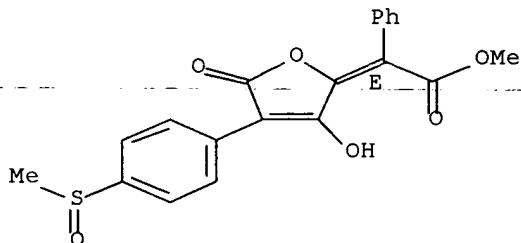
Double bond geometry as shown.



RN 38746-78-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-[4-(methylsulfinyl)phenyl]-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

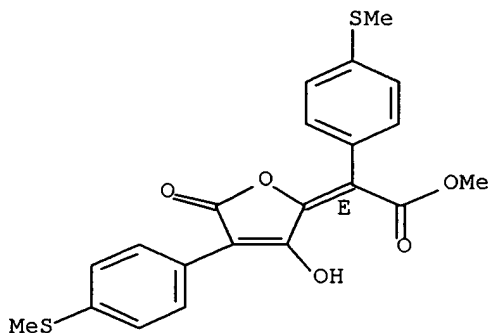
Double bond geometry as shown.





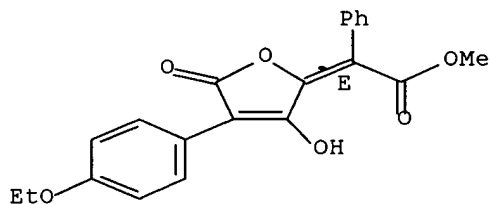
RN 38746-79-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy[4-(methylthio)phenyl]-5-oxo-2(5H)-furanylidene]-4-(methylthio)-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



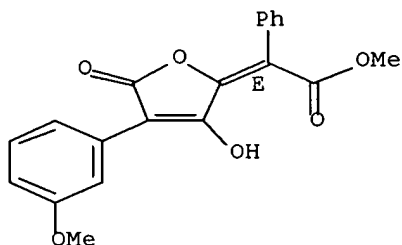
RN 38746-80-4 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(4-ethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



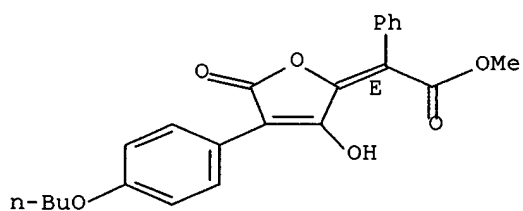
RN 38746-82-6 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 38746-84-8 CAPLUS  
 RN 38746-86-0 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(4-butoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

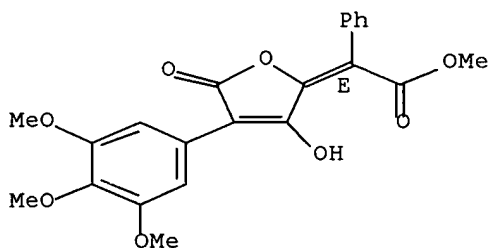
Double bond geometry as shown.



RN 38746-88-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

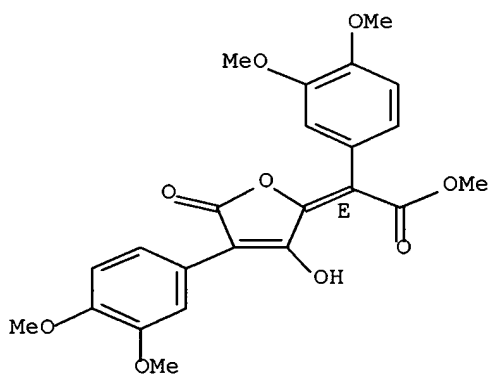
Double bond geometry as shown.



RN 38746-89-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dimethoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

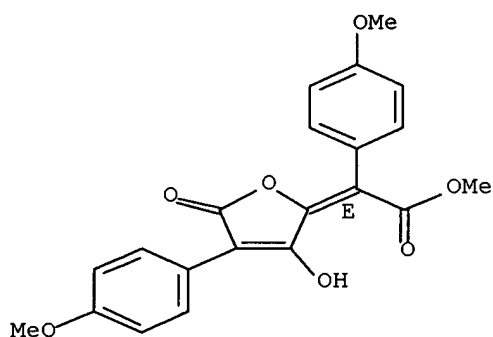
Double bond geometry as shown.



RN 38746-90-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-4-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

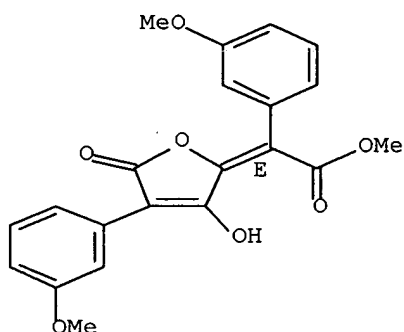
Double bond geometry as shown.



RN 38746-91-7 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-3-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

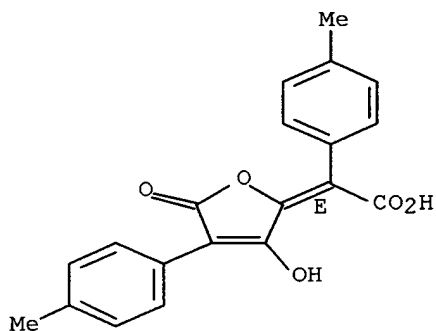
Double bond geometry as shown.



RN 38747-07-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

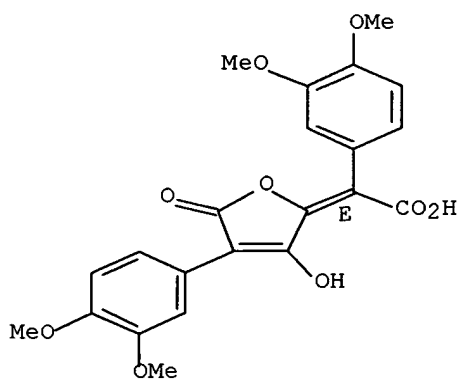
Double bond geometry as shown.



RN 38747-10-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dimethoxy-, (E)- (9CI) (CA INDEX NAME)

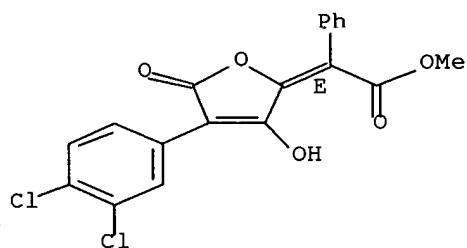
Double bond geometry as shown.



RN 38747-14-7 CAPLUS

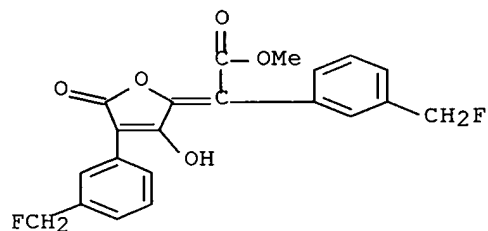
CN Benzeneacetic acid, .alpha.-[4-(3,4-dichlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



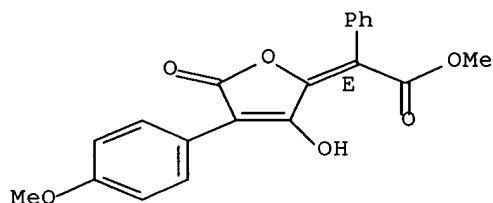
RN 39991-91-8 CAPLUS

CN Benzeneacetic acid, 3-(fluoromethyl)-.alpha.-[4-[3-(fluoromethyl)phenyl]-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 149 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1973:55341 CAPLUS  
 DN 78:55341  
 TI Isolation of vulpinic, pinastric, and (+)-usnic acids from *Cetraria canadensis*  
 AU Wat, Chi-Kit; Towers, G. H. N.  
 CS Dep. Bot., Univ. British Columbia, Vancouver, BC, Can.  
 SO Phytochemistry (Elsevier) (1972), 11(12), 3540  
 CODEN: PYTCAS; ISSN: 0031-9422  
 DT Journal  
 LA English  
 AB *C. canadensis* was collected on *Pinus ponderosa* in May. An acetone ext. of the lichen was fractionated. Vulpinic and pinastric acids were found in the NaHCO<sub>3</sub> fraction, and (+)-usnic acid was found in the NaOH fraction.  
 IT **481-64-1**  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
 (of *Cetraria canadensis*)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 150 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1973:29471 CAPLUS

DN 78:29471

TI 4-Aryl-2-[(.alpha.-(methoxycarbonyl)benzylidene]-3-hydroxy-5-oxo-2,5-dihydrofurans

IN Foden, Frederick Roger; O'Mant, Derrick Michael

PA Imperial Chemical Industries Ltd.

SO Ger. Offen., 14 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2219019	A	19721026	DE 1972-2219019	19720419
	GB 1335269	A	19731024	GB 1971-10038	19710420
PRAI	GB 1971-10038		19710420		

GI For diagram(s), see printed CA Issue.

AB Two title furans I and II, useful antiinflammatory drugs, were prepd. by treatment of the dione III with MeOH and aq. NaOH at room temp. and sepn.

by crystn.

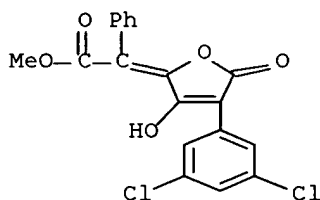
IT **39133-76-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 39133-76-1 CAPLUS

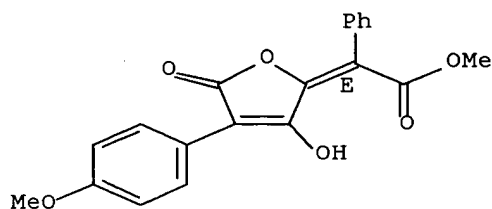
CN Benzeneacetic acid, .alpha.-[4-(3,5-dichlorophenyl)-3-hydroxy-5-oxo-2(5H)-

furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 151 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1972:522946 CAPLUS  
 DN 77:122946  
 TI Growth regulating characteristics of lichen and moss constituents  
 AU Huneck, S.; Schreiber, K.  
 CS Inst. Biochem. Pflanz., Dtsch. Akad. Wiss. Berlin, Halle/Saale, Ger.  
 Dem.  
 Rep.  
 SO Phytochemistry (Elsevier) (1972), 11(8), 2429-34  
 CODEN: PYTCAS; ISSN: 0031-9422  
 DT Journal  
 LA German  
 AB Thirty-three lichen constituents (aliphatic compds., depsides, depsidones, dibenzofurans, diphenylbutadienes, xanthones, an anthraquinone, and a chromone) and 6 moss constituents were divided into 2 groups: (1) compds. showing growth-stimulating activity toward higher plants at low concns. (10<sup>-7</sup>-10<sup>-6</sup>M) and inhibitory activity at higher concns. (10<sup>-4</sup>-10<sup>-3</sup>M); and (2) compds. inhibiting growth at all concns. Usnic acid was among the most potent growth stimulators; growth of pea seedlings from seeds impregnated for 48 hr with 10<sup>-7</sup>M usnic acid was .sim. 175% of that of control seedlings.  
 IT **38311-68-1**  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); .USES (Uses)  
 (plant growth regulators)  
 RN 38311-68-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[(3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furan-2-ylidene)]-, methyl ester, potassium salt (9CI) (CA INDEX NAME)

Double bond geometry as shown.



● K

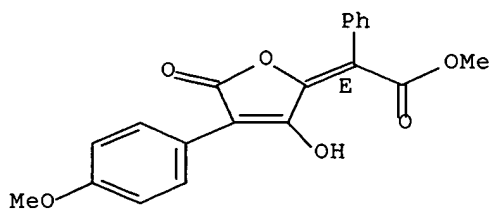
L9 ANSWER 152 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1972:514069 CAPLUS  
 DN 77:114069  
 TI Esters of 3,4-dihydroxy-2,5-diphenyl-2,4-hexadiene-1,6-dioic acid  
 .gamma.-lactone  
 IN Sutton, Blaine Mote; Walz, Donald Thomas; Wilson, James William  
 PA Smith Kline and French Laboratories  
 SO Ger. Offen., 32 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2160119	A	19720608	DE 1971-2160119	19711203
PRAI	DE 1971-2160119		19711203		

GI For diagram(s), see printed CA Issue.  
 AB Fifteen title compds. (I; R = Me or Et; R1, R2 = H, 4-Cl, 3-Cl, 4-MeO,  
 4-Me, 4,3-FC1, 4-F, 3-F3C, 3,4,5-(MeO)3, 3,4-(MeO)2, or 3-MeO), useful  
 as  
 antiarthritic drugs, were prepd. by reaction of R1C6H4CH2CN with di-Et  
 oxalate via R1C6H4CH(CN)COCO2Et, its reaction with R2C6H4CH2CN via  
 R1C6H4CH(CN)COCOCH(CN)C6H4R2 followed by lactonization and partial  
 lactone  
 cleavage. Thus, PhCH2CN and EtO2CCO2Et were added to MeONa-Me-OH, and  
 the  
 mixt. was refluxed 2 hr to give PhCH(CN)COCO2Et, which was similarly  
 treated with further PhCH2CN to give PhCH(CN)COCOCHPhCN (II). Refluxing  
 II with AcOH-H2SO4 gave the monolactone, which on refluxing with Ac2O  
 gave  
 the dilactone (III). Refluxing III in MeOH in the presence of HCl gave  
 I  
 (R = Me, R1 = R2 = H). Using EtOH instead of MeOH gave the Et ester.  
 IT **481-64-1P 27394-71-4P 32883-73-1P**  
**32883-77-5P 37542-21-5P 37542-22-6P**  
**37542-24-8P 37542-25-9P 38731-08-7P**  
**38731-10-1P 38746-76-8P 38746-78-0P**  
**38746-79-1P 38746-80-4P 38746-82-6P**  
**38746-84-8P 38746-86-0P 38746-88-2P**  
**38746-89-3P 38746-90-6P 38746-91-7P**  
**38747-01-2P 38747-07-8P 38747-10-3P**  
**38747-14-7P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
 furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

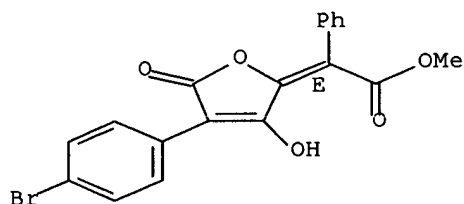




RN 27394-71-4 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-bromophenyl)-3-hydroxy-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

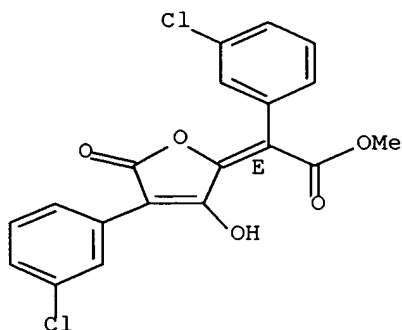
Double bond geometry as shown.



RN 32883-73-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

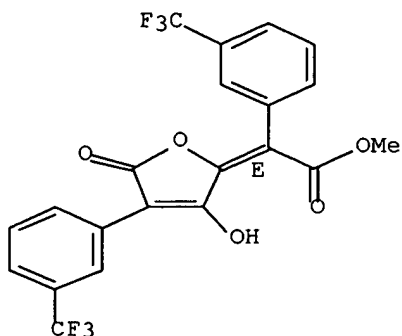
Double bond geometry as shown.



RN 32883-77-5 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-[3-(trifluoromethyl)phenyl]-  
2(5H)-furanylidene]-3-(trifluoromethyl)-, methyl ester, (E)- (9CI) (CA  
INDEX NAME)

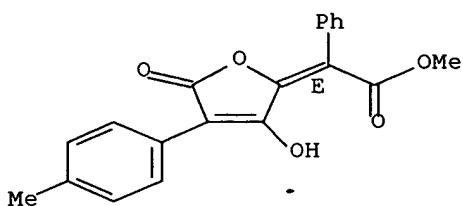
Double bond geometry as shown.



RN 37542-21-5 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

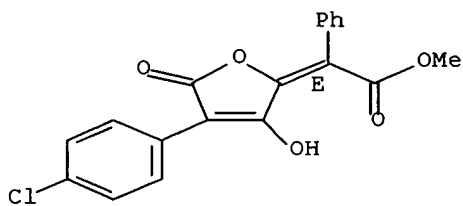
Double bond geometry as shown.



RN 37542-22-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

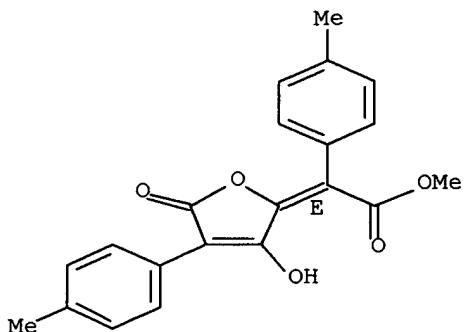
Double bond geometry as shown.



RN 37542-24-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

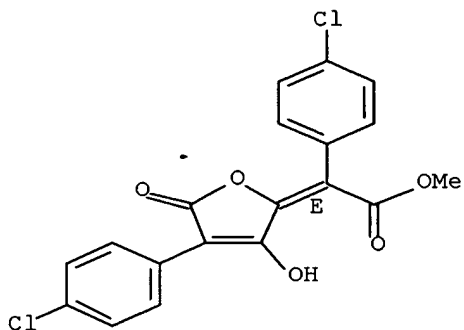
Double bond geometry as shown.



RN 37542-25-9 CAPLUS

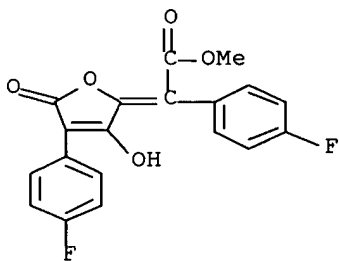
CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2-(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



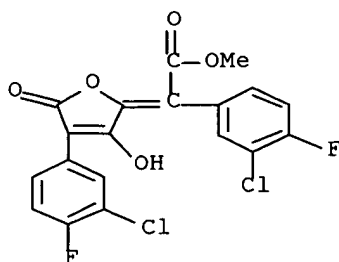
RN 38731-08-7 CAPLUS

CN Benzeneacetic acid, 4-fluoro-.alpha.-[4-(4-fluorophenyl)-3-hydroxy-5-oxo-2-(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 38731-10-1 CAPLUS

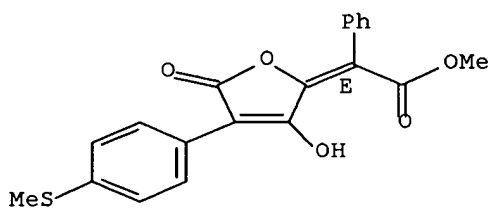
CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chloro-4-fluorophenyl)-3-hydroxy-5-oxo-2-(5H)-furanylidene]-4-fluoro-, methyl ester (9CI) (CA INDEX NAME)



RN 38746-76-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-[4-(methylthio)phenyl]-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

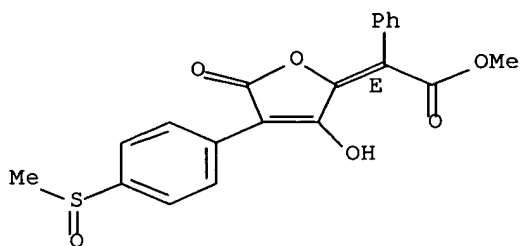
Double bond geometry as shown.



RN 38746-78-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(methylsulfinyl)phenyl]-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

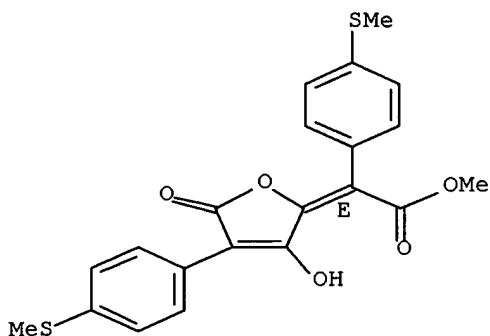
Double bond geometry as shown.



RN 38746-79-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy[4-(methylthio)phenyl]-5-oxo-2(5H)-furan-2-ylidene]-4-(methylthio)-, methyl ester, (E)- (9CI) (CA INDEX NAME)

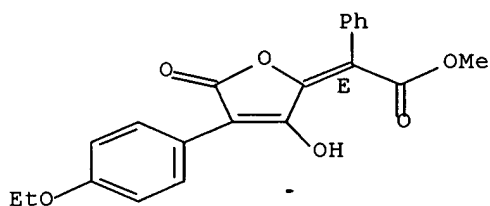
Double bond geometry as shown.



RN 38746-80-4 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-ethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furan-4-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

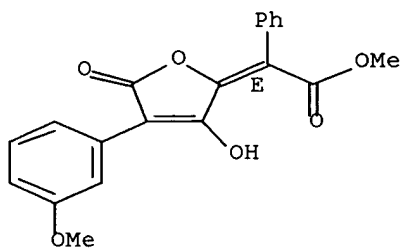
Double bond geometry as shown.



RN 38746-82-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-methoxyphenyl)-5-oxo-2(5H)-furan-4-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

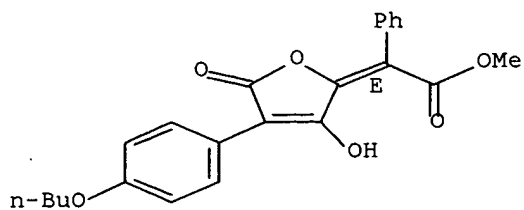


RN 38746-84-8 CAPLUS

RN 38746-86-0 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-butoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furan-4-ylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

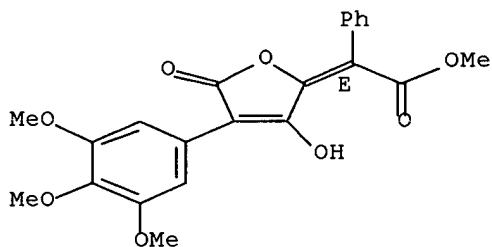
Double bond geometry as shown.



RN 38746-88-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

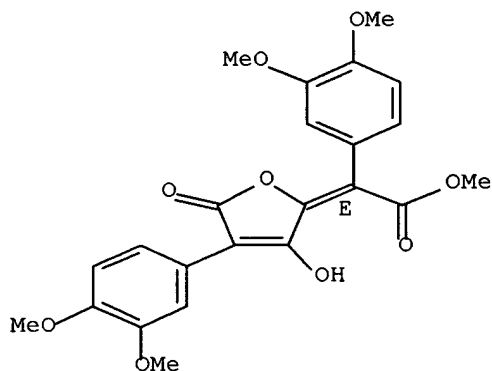
Double bond geometry as shown.



RN 38746-89-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dimethoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

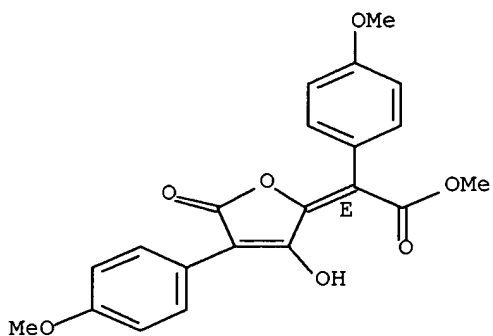
Double bond geometry as shown.



RN 38746-90-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-4-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

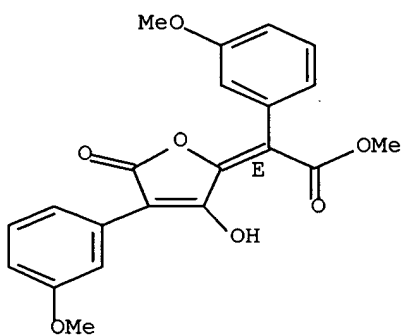
Double bond geometry as shown.



RN 38746-91-7 CAPLUS

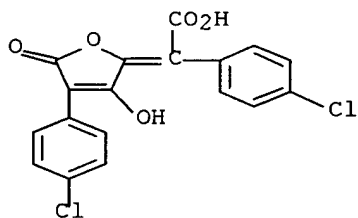
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-methoxyphenyl)-5-oxo-2(5H)-furanlydene]-3-methoxy-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 38747-01-2 CAPLUS

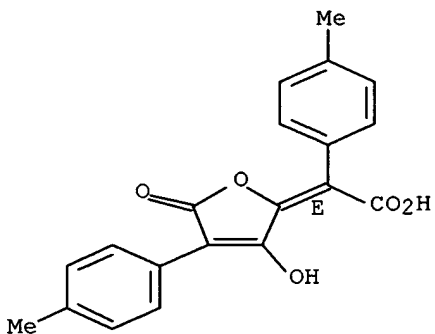
CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]- (9CI) (CA INDEX NAME)



RN 38747-07-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanlydene]-4-methyl-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

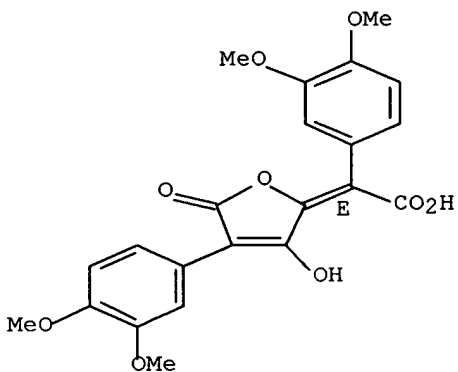


RN 38747-10-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-hydroxy-5-oxo-2(5H)-

furanylidene]-3,4-dimethoxy-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

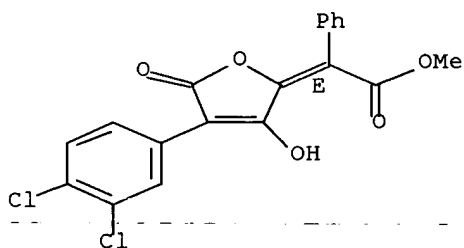


RN 38747-14-7 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dichlorophenyl)-3-hydroxy-5-oxo-2(5H)-

furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.





L9 ANSWER 153 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1972:488185 CAPLUS

DN 77:88185

TI Application of ozonolysis and gas chromatography for structure elucidation

of substituted vulpinic acids

AU White, E. Roderick; Sutton, Blaine M.; Blank, Judith E.; Moeckel, Enno; Zarembo, John E.

CS Smith, Kline and French Lab., Philadelphia, PA, USA

SO Analytical Chemistry (1972), 44(9), 1582-5

CODEN: ANCHAM; ISSN: 0003-2700

DT Journal

LA English

AB Ozonolysis and gas chromatog. were utilized to elucidate the structures of

a series of substituted vulpinic acid derivs. Detn. of the position of unsatn. through microozonolysis provides the information necessary to deduce addnl. functional group positions in the mols. Gas

chromatographic

sepn. is carried out initially on the untreated ozonolysis products.

This

permits the neutral species to elute and identifies the neutral portion

of

the mol. Silylation and gas chromatographic anal. of the same sample

now

permits the silyl esters derived from the acidic portion of the mol. to

be

identified. Reductive ozonide cleavage was unnecessary and was

eliminated

to reduce sample prepn. time. Solvent losses and side reaction products were minimized by carrying out controlled ozonolysis reactions at -70.degree.C. Verification of reaction products identified by gas chromatog. was made by using combined gas chromatog.-mass spectrometry. The method is rapid and requires less than a microgram of sample.

IT 37542-21-5P 37542-22-6P 37542-24-8P

37542-25-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

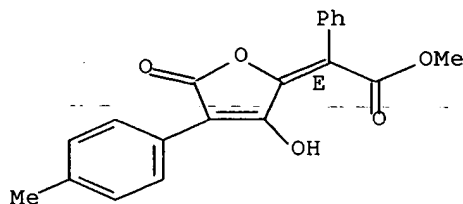
(Reactant or reagent)

(prepn. and ozonolysis of)

RN 37542-21-5 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

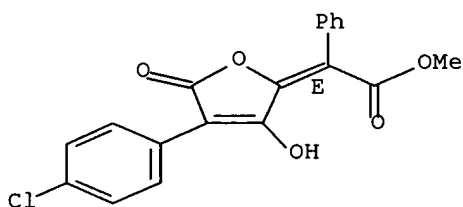
Double bond geometry as shown.



RN 37542-22-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

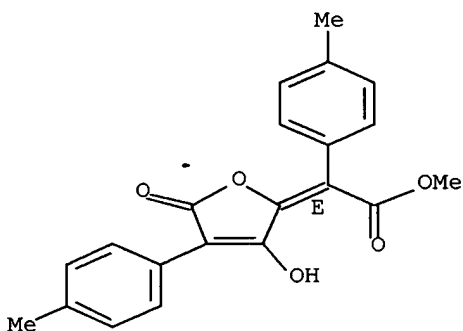
Double bond geometry as shown.



RN 37542-24-8 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methylphenyl)-5-oxo-2(5H)-  
furanylidene]-4-methyl-, methyl ester, (E)- (9CI) (CA INDEX NAME)

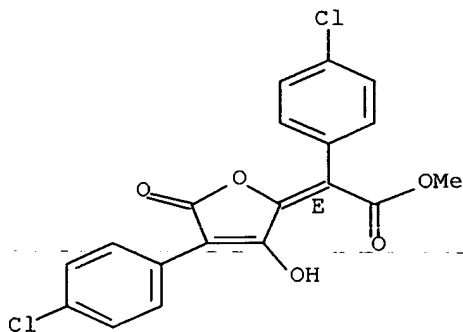
Double bond geometry as shown.



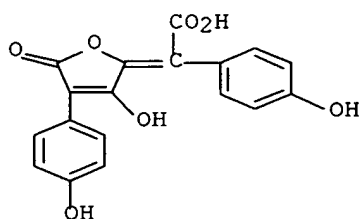
RN 37542-25-9 CAPLUS

CN Benzeneacetic acid, 4-chloro-.alpha.-[4-(4-chlorophenyl)-3-hydroxy-5-  
oxo-  
2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

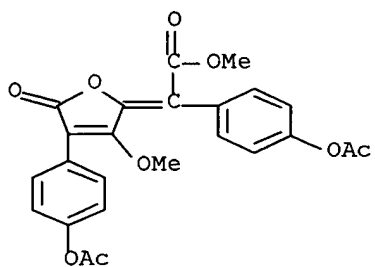
Double bond geometry as shown.



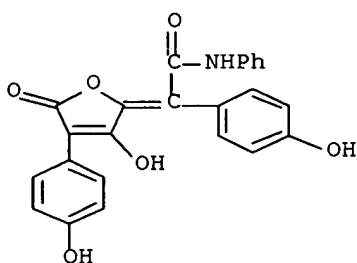
L9 ANSWER 154 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1972:96960 CAPLUS  
 DN 76:96960  
 TI Metabolic products of *Clitocybe illudens*. VIII. Atromentic acid from *Clitocybe illudens*  
 AU Singh, Pratap; Anchel, Majorie  
 CS New York Bot. Gard., Bronx, NY, USA  
 SO Phytochemistry (Elsevier) (1971), 10(12), 3259-62  
 CODEN: PYTCAS; ISSN: 0031-9422  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB Atromentic acid (I), was isolated from culture liquids of *C. illudens*. Identification, based on analyses and spectra of the compd. and a no. of new derivs., was confirmed by direct comparison of its tetramethylated deriv. with a synthetic sample. Products giving a blueing reaction were detected in the same culture liqs., and an unidentified compd. was isolated in cryst. form as its methylation product, C42H36O12. The presence of pulvinic acid derivs. in Basidiomycetes other than the Boletaceae has been reported in only 1 other instance.  
 IT **521-56-2**  
 RL: BIOL (Biological study)  
 (from *Clitocybe illudens*)  
 RN 521-56-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



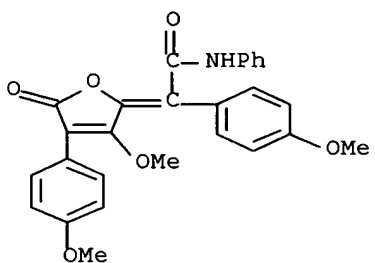
IT **35930-35-9P 35930-36-0P 35930-37-1P**  
**36138-71-3P 36138-73-5P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 35930-35-9 CAPLUS  
 CN Benzeneacetic acid, 4-(acetyloxy)-.alpha.-[4-[4-(acetyloxy)phenyl]-3-methoxy-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



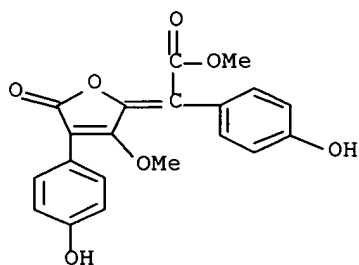
RN 35930-36-0 CAPLUS  
 CN Benzeneacetamide, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2-(5H)-furanylidene]-N-phenyl- (9CI) (CA INDEX NAME)



RN 35930-37-1 CAPLUS  
 CN Benzeneacetamide, 4-methoxy-.alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2-(5H)-furanylidene]-N-phenyl- (9CI) (CA INDEX NAME)

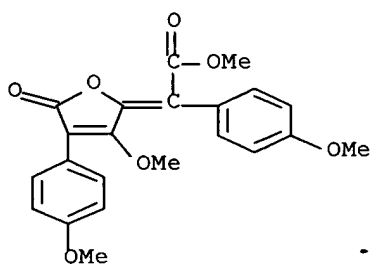


RN 36138-71-3 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[4-(4-hydroxyphenyl)-3-methoxy-5-oxo-2-(5H)-furanylidene]-, methyl ester (9CI) (CA-INDEX NAME)

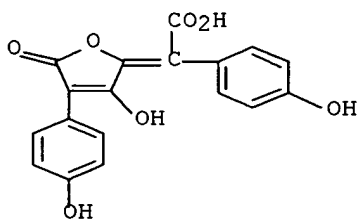


RN 36138-73-5 CAPLUS

CN Benzeneacetic acid, 4-methoxy-.alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 155 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1972:59132 CAPLUS  
 DN 76:59132  
 TI Separation of some terphenylquinone and tetronic acid derivatives by  
 thin-layer chromatography  
 AU Garrett, R. D.; Sullivan, G.  
 CS Coll. Pharm., Univ. Texas, Austin, TX, USA  
 SO Journal of Chromatography (1971), 63(2), 457-8  
 CODEN: JOCRAM; ISSN: 0021-9673  
 DT Journal  
 LA English  
 AB The title compds. were sepd. by thin-layer chromatog. using 2 solvent  
 systems and 6 ref. compds. The 250 .mu. Silica Gel G plates were dried  
 30 min at room temp. and activated 30 min at 110.degree.. Anal. grade  
 C6H6-HCO2Et-HCO2H (13:5:4) and MeOH-0.3M C2H2O4.2H2O-MeOH/HCO2H  
 (100:2:0.1) were used. Rf values and spot colors of 6 ref. compds. were  
 given.  
 IT **521-56-2**  
 RL: PROC (Process)  
 (thin-layer chromatographic sepn. of, from terphenylquinones and  
 tetronic acids)  
 RN 521-56-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-  
 oxo-  
 2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



L9 ANSWER 156 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1972:44011 CAPLUS

DN 76:44011

TI Formation of pulvinic acids by *Hygrophoropsis aurantiaca*  
(Paxillaceae-Boletales) in vitro

AU Bresinsky, A.; Bachmann, R.

CS Bot. Staatssamml. Muenchen, Munich, Fed. Rep. Ger.

SO Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie,  
Organische

Chemie, Biochemie, Biophysik, Biologie (1971), 26(10), 1086-7

CODEN: ZENBAX; ISSN: 0044-3174

DT Journal

LA German

AB Variegatic, xerocomic, and atromentic acid were identified by thin-layer  
chromatog. in culture media of the title mushroom, thus demonstrating  
that

*Hygrophoropsis* belongs to Boletales.

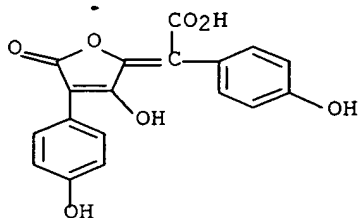
IT 521-56-2 20988-30-1 24946-71-2

RL: BIOL (Biological study)

(in *Hygrophoropsis aurantiaca*, taxonomy in relation to)

RN 521-56-2 CAPLUS

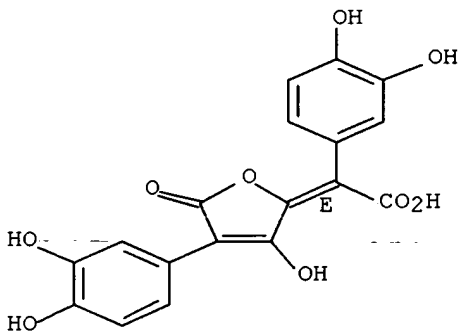
CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-  
oxo-  
2(5H)-furanlydene]- (9CI) (CA INDEX NAME)



RN 20988-30-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-  
2(5H)-  
furanlydene]-3,4-dihydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 24946-71-2 CAPLUS

L9 ANSWER 157 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1972:1789 CAPLUS

DN 76:1789

TI Comparison of pigments in carpophores and saprophytic cultures of Paxillus

pannuoides and Paxillus atrotomentosus

AU Gaylord, M. C.; Brady, L. R.

CS Coll. Pharm., Univ. Washington, Seattle, WA, USA

SO Journal of Pharmaceutical Sciences (1971), 60(10), 1503-8

CODEN: JPMSAE; ISSN: 0022-3549

DT Journal

LA English

AB Chromatographic studies, using several solvent systems with thin-layer polyamide and silica gel G plates, indicated that P. pannuoides and P. atrotomentosus contain several pigments in common in both carpophores

and

surface cultures. Atromentin was isolated and identified from the carpophores of P. pannuoides, and atromentic and xerocomic acids were recovered and identified from the cultures of this species. These pigments were reported previously from the corresponding growth forms of P. atrotomentosus. Identification of the pigments was based on comparisons of chromatographic properties and spectral data (ir, uv, and high-resolution mass spectra) with authentic materials. Preliminary interpretation of the complex mass spectrum of atromentin suggested the involvement of at least 3 basic fragmentation pathways. The pKa values and fluorescent spectra (before and after exposure to radiant energy) of atromentic, pulvinic, and xerocomic acids were detd., and the response

of

xerocomic acid to thermal energy during sublimation was clarified.

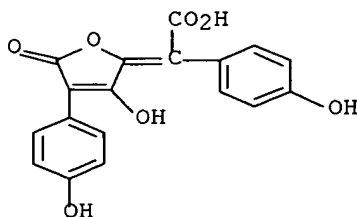
IT 521-56-2 33340-29-3

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
(of Paxillus)

RN 521-56-2 CAPLUS

CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-

2(5H)-furanlydene]- (9CI) (CA INDEX NAME)



RN 33340-29-3 CAPLUS



L9 ANSWER 158 OF 186 CAPLUS COPYRIGHT 2003 ACS  
AN 1971:472462 CAPLUS  
DN 75:72462  
TI Constituents of the higher fungi. XI. Boviquinone-3,  
(2,5-dihydroxy-3-farnesyl-1,4-benzoquinone), diboviquinone-3,4,  
methylenediboviquinone-3,3, and xerocomic acid from Gomphidius rutilus  
and  
diboviquinone-4,4 from Boletus (Suillus) bovinus  
AU Edwards, R. L.; Beaumont, P. C.  
CS Sch. Chem., Univ. Bradford, Bradford, UK  
SO Journal of the Chemical Society [Section] C: Organic (1971), (14),  
2582-5  
CODEN: JSOOAX; ISSN: 0022-4952  
DT Journal  
LA English  
GI For diagram(s), see printed CA Issue.  
AB Boviquinone-3 (I) is a constituent of the basidiomycete G. rutilus; in  
addn. xerocomic acid, methylenediboviquinone-3,3 [2,2'-methylenebis(5-  
farnesyl-3,6-dihydroxy-p-benzoquinone)], and diboviquinone-3,4  
[5-farnesyl-5'-(geranylgeranyl)-3,3',6,6'-tetrahydroxy-2,2'-bi-p-  
benzoquinone] were isolated. Diboviquinone-4,4 [5,5'-  
bis(geranylgeranyl)-  
3,3',6,6'-tetrahydroxy-2,2'-bi-p-benzoquinone] was isolated from B.  
bovinus.  
IT **24946-71-2**  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)  
(of Gomphidius rutilus)  
RN 24946-71-2 CAPLUS

L9 ANSWER 159 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1971:448889 CAPLUS  
 DN 75:48889  
 TI Antipyretic dihydrofuran derivatives  
 IN Foden, Frederick R.; O'Mant, Derrick M.  
 PA Imperial Chemical Industries Ltd.  
 SO Ger. Offen., 19 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2053205	A	19710506	DE 1970-2053205	19701029
	GB 1268523	A	19720329	GB 1969-52969	19691029
	US 3676464	A	19720711	US 1970-82214	19701019
	FR 2070175	A5	19710910	FR 1970-38935	19701028
	FR 2070175	B1	19740823		
PRAI	GB 1969-52969		19691029		

GI For diagram(s), see printed CA Issue.

AB The title compds. (I) are prepd. To a soln. of NaOEt and (CO<sub>2</sub>Et)<sub>2</sub> in EtOH

is added m-chlorobenzyl cyanide and the mixt. kept 1 hr at 60-70.degree. to yield 3,4-dioxo-2,5-bis(m-chlorophenyl)adiponitrile, which is refluxed

with a mixt. of AcOH, H<sub>2</sub>SO<sub>4</sub>, and H<sub>2</sub>O to yield 3,6-bis(m-chlorophenyl)-2,5-dioxo-2,5-dihydrofuro[3,2-b]furan (II). A mixt. of II, MeOH, and 18N NaOH

is kept 15 min at room temp. to yield 2-[m-chloro-.alpha.-(methoxycarbonyl)benzylidene]-4-(m-chlorophenyl)-3-hydroxy-5-oxo-2,5-dihydrofuran. Also prepd. are the following I (R is Me) (X and Y given):

I, I; CF<sub>3</sub>, CF<sub>3</sub>; H, CF<sub>3</sub>; CF<sub>3</sub>, H; Cl, H; H, Cl.

IT **32883-73-1P 32883-76-4P 32883-77-5P**

**32883-78-6P 33050-81-6P**

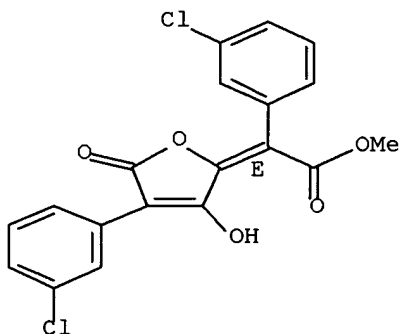
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 32883-73-1 CAPLUS

CN Benzeneacetic acid, 3-chloro-.alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-

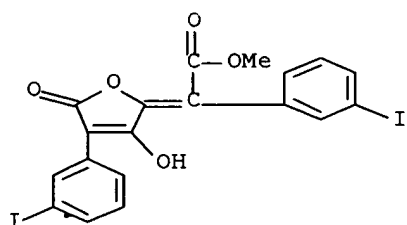
2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 32883-76-4 CAPLUS

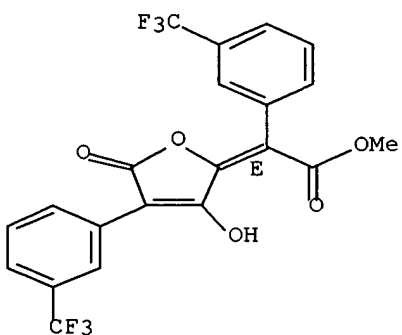
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(3-iodophenyl)-5-oxo-2(5H)-furanylidene]-3-iodo-, methyl ester (9CI) (CA INDEX NAME)



RN 32883-77-5 CAPLUS

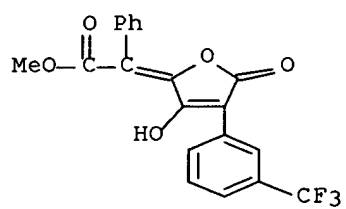
CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-[3-(trifluoromethyl)phenyl]-2(5H)-furanylidene]-3-(trifluoromethyl)-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



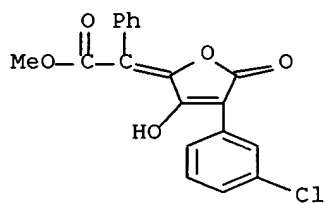
RN 32883-78-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-[3-(trifluoromethyl)phenyl]-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)

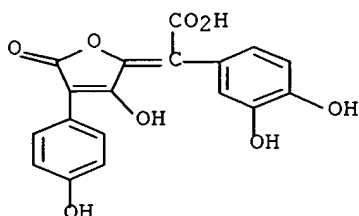


RN 33050-81-6 CAPLUS

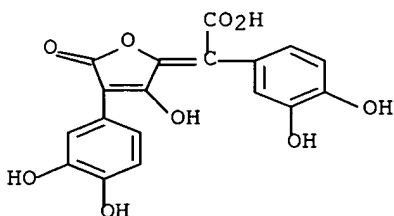
CN Benzeneacetic acid, .alpha.-[4-(3-chlorophenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 160 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1971:430232 CAPLUS  
 DN 75:30232  
 TI Pigments of fungi. VI. Helveticone, a bovinone-type benzoquinone derivative from *Chroogomphus helveticus* and *Ch. rutilus*  
 AU Steglich, Wolfgang; Esser, F.; Pils, I.  
 CS Org.-Chem. Inst., Tech. Univ. Muenchen, Munich, Fed. Rep. Ger.  
 SO Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische Chemie, Biochemie, Biophysik, Biologie (1971), 26(4), 336-8  
 CODEN: ZENBAX; ISSN: 0044-3174  
 DT Journal  
 LA German  
 AB The characteristic pigment from *C. helveticus* and *C. rutilus* was identified as helveticone (2,4-dihydroxy-3-farnesyl-1,4-benzoquinone). Minor pigments were bovinone and xerocomic acid, already known from Boletaceae.  
 IT **27711-61-1**  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
 (of *Chroogomphus*)  
 RN 27711-61-1 CAPLUS  
 CN Benzeneacetic acid, 3,4-dihydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]- (9CI) (CA INDEX NAME)

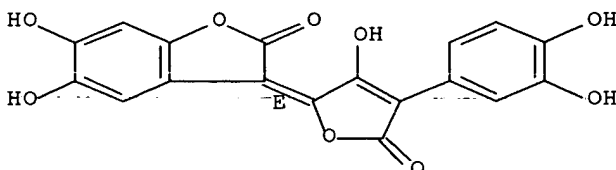


L9 ANSWER 161 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1971:416130 CAPLUS  
 DN 75:16130  
 TI Pigments of fungi. VII. Identification and chemotaxonomic evaluation  
 of  
 pulvinic acids in Rhizopogon (Gasteromycetes)  
 AU Steglich, Wolfgang; Pils, I.; Bresinsky, A.  
 CS Org. Chem. Inst., Tech. Univ. Muenchen, Munich, Fed. Rep. Ger.  
 SO Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie,  
 Organische  
 Chemie, Biochemie, Biophysik, Biologie (1971), 26(4), 376-7  
 CODEN: ZENBAX; ISSN: 0044-3174  
 DT Journal  
 LA German  
 GI For diagram(s), see printed CA Issue.  
 AB Title compds. were extd. with acid EtOH from a fruit body of R. roseolus  
 and, after removal of brown components by extn. with petroleum ether,  
 sepd. by preparative thin-layer chromatog. into variegatic acid (I) and  
 variegatorubin (II). Therefore, a relation exists between  
 Gasteromycetes  
 and Boletaceae.  
 IT **15404-65-6 27286-59-5**  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
 BIOL (Biological study); OCCU (Occurrence)  
 (of Rhizopogon roseolus)  
 RN 15404-65-6 CAPLUS  
 CN Benzenecetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-  
 2(5H)-  
 furanylidene]-3,4-dihydroxy- (9CI) (CA INDEX NAME)

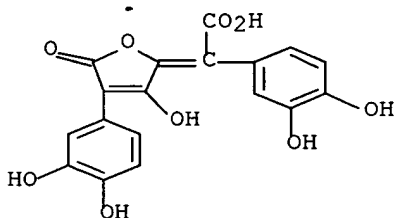


RN 27286-59-5 CAPLUS  
 CN 2(3H)-Benzofuranone, 3-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
 furanylidene]-5,6-dihydroxy-, (3E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

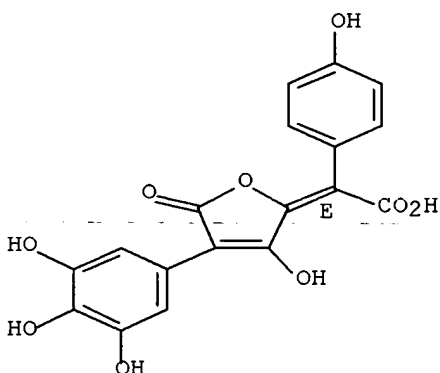


L9 ANSWER 162 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1971:401302 CAPLUS  
 DN 75:1302  
 TI Thin layer chromatographic analysis of the pigments of Boletales and other macromycetes  
 AU Bresinsky, A.; Orendi, P.  
 CS Fed. Rep. Ger.  
 SO Zeitschrift fuer Pilzkunde (1970), 36(1-2), 135-69  
 CODEN: ZEPIBV; ISSN: 0044-3352  
 DT Journal  
 LA German  
 AB The thinlayer chromatog. anal. of the pigments of 49 Boletales families is described. Not all are characterized by the presence of variegatic, xerocomic and/or gomphidic acids. Taxonomic questions concerning Boletales and other macromycetes are discussed.  
 IT **15404-65-6 25328-77-2 27711-61-1**  
 RL: BIOL (Biological study)  
 (of Boletales, taxonomy in relation to)  
 RN 15404-65-6 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy- (9CI) (CA INDEX NAME)



RN 25328-77-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trihydroxyphenyl)-2(5H)-furanylidene]-, (.alpha.E)- (9CI) (CA INDEX NAME)

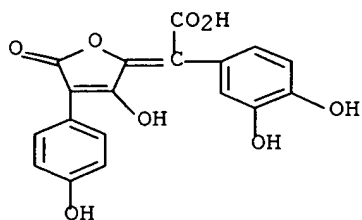
Double bond geometry as shown.



RN 27711-61-1 CAPLUS

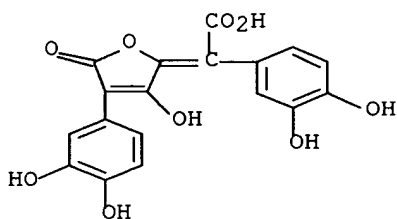
CN Benzeneacetic acid, 3,4-dihydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-

oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)

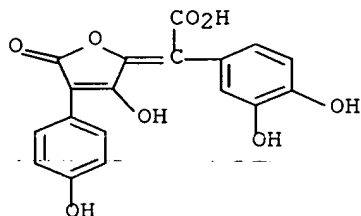




L9 ANSWER 163 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1971:136391 CAPLUS  
 DN 74:136391  
 TI Chemotaxonomy and biosynthetic relations of Boletineae pigments  
 AU Mead, R. J.; Segal, Wolfe  
 CS Dep. Biochem., Univ. Western Australia, Nedlands, Australia  
 SO Biochemical Journal (1971), 121(1), 26p-27p  
 CODEN: BIJOAK; ISSN: 0264-6021  
 DT Journal  
 LA English  
 AB In a study of 8 Boletineae (Agaricales) species of Boletus and Suillus genera, 4 pulvinic acids were isolated by thin-layer chromatog. These were variegatic acid, xerocomic acid, and 2 new pulvinic acids, one of which exhibited the blueing reaction seen when Boletineae plants are bruised. The genus Paxillus of the suborder Agaricineae (Agaricales) yielded variegatic acid, a new nonblueing acid, benzoquinone, and other pulvinic acids suggesting that there is a chemotaxonomic link between the suborders. *P. involutus* contains involutin. The biosynthesis of this metabolite may be explained by a bypass from the pulvinic acid pathway and appears to involve a decarboxylation of an intermediate muconic acid deriv., cyclodehydration, and redn.  
 IT **15404-65-6 27711-61-1**  
 RL: BIOL (Biological study)  
 (of Agaricales, taxonomy in relation to)  
 RN 15404-65-6 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy- (9CI) (CA INDEX NAME)



RN 27711-61-1 CAPLUS  
 CN Benzeneacetic acid, 3,4-dihydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-2(5H)-furanylidene]- (9CI) (CA INDEX NAME)



L9 ANSWER 164 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1971:1321 CAPLUS

DN 74:1321

TI Isolation of diphenyl-substituted tetronic acids from cultures of  
Paxillus

atrotomentosus

AU Gaylord, M. C.; Benedict, R. G.; Hatfield, G. M.; Brady, L. R.

CS Coll. of Pharm., Univ. of Washington, Seattle, WA, USA

SO Journal of Pharmaceutical Sciences (1970), 59(10), 1420-3

CODEN: JPMSAE; ISSN: 0022-3549

DT Journal

LA English

AB Pigments which accumulated in surface cultures of *P. atrotomentosus* were studied. The nutrient broth and mycelium of 2-month-old cultures were blended, and the pigments were partitioned into ether. Two pigments

were

isolated by dry-column chromatog. by using a silica gel adsorbent and ether satd. with HCl as a chromatographic solvent. The major pigment

was

identified as xerocomic acid, and the minor pigment was atromentic acid. Identification of these acids was based on uv and ir spectra, mass spectral fragmentation patterns, high-resolution mass spectroscopy, and properties of their acetyl derivs. Examn. of fresh carpophores of *P. atrotomentosus* failed to demonstrate detectable amts. of either of these tetronic acids. These pigments have been reported to occur in fresh carpophores of some species in the Boletaceae and Gomphidiaceae, but

this

is the 1st reported presence of any diphenylsubstituted tetronic acid in the saprophytic culture of a fungus.

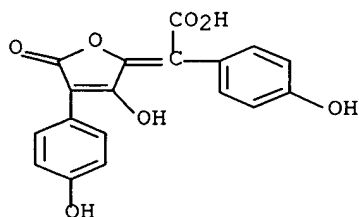
IT 521-56-2 25287-88-1

RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
BIOL (Biological study); OCCU (Occurrence)  
(of *Paxillus atrotomentosus*)

RN 521-56-2 CAPLUS

CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-4-(4-hydroxyphenyl)-5-oxo-

2(5H)-furanylidene]- (9CI) (CA INDEX NAME)

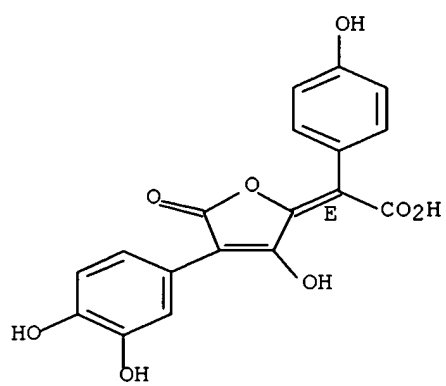


RN 25287-88-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-

furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 165 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1970:435136 CAPLUS

DN 73:35136

TI Fungi pigments. V. Variegatorubin, an oxydation product of variegatic acid from Suillus piperatus and other Boletaceae

AU Steglich, Wolfgang; Furtner, Willibald; Prox, Axel

CS Org.-Chem. Inst., Tech. Hochsch. Muenchen, Munich, Fed. Rep. Ger.

SO Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische

Chemie, Biochemie, Biophysik, Biologie (1970), 25(5), 557-8

CODEN: ZENBAX; ISSN: 0044-3174

DT Journal

LA German

GI For diagram(s), see printed CA Issue.

AB Variegatorubin (I), m. >320.degree. (decompn.) (tetraacetate m. 260-1.degree.), was isolated from S. piperatus and prepd. from variegatic

acid (II) by oxidn. with H<sub>2</sub>O<sub>2</sub> in 50:1 AcOEt-HOAc. I was also prepd. by condensation of 2,4,5-(MeO)3C<sub>6</sub>H<sub>2</sub>CH<sub>2</sub>CN with EtO<sub>2</sub>CCO<sub>2</sub>Et to give

2,4,5-(MeO)3C<sub>6</sub>H<sub>2</sub>CH(CN)COCO<sub>2</sub>Et, m. 122.degree., which reacted with (MeO)2C<sub>6</sub>H<sub>3</sub>CH<sub>2</sub>CN to yield II [2,4,5-

(MeO)3C<sub>6</sub>H<sub>2</sub>C(CN):C(OH)C(OH):C(CN)C<sub>6</sub>H<sub>3</sub>(OM

e)2-3,4,] m. 246-7.degree.. Heating II with HBr-HOAc gave I.

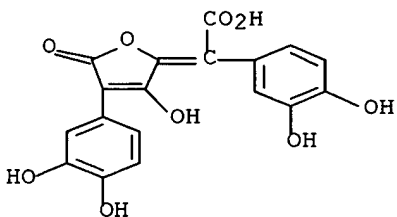
IT **15404-65-6P 27286-57-3P 27286-59-5P**

RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)

RN 15404-65-6 CAPLUS

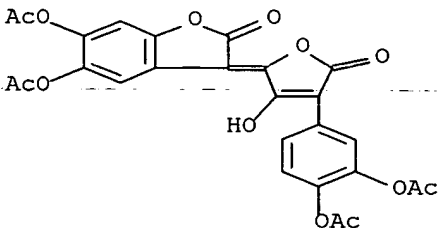
CN Benzenecetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-

furanylidene]-3,4-dihydroxy- (9CI) (CA INDEX NAME)



RN 27286-57-3 CAPLUS

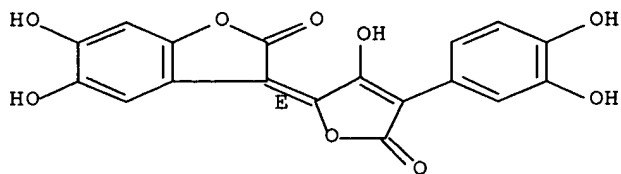
CN 2(3H)-Benzofuranone, 3-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furylidene]-5,6-dihydroxy-, tetraacetate (8CI) (CA INDEX NAME)



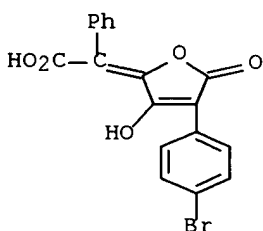
RN 27286-59-5 CAPLUS

CN 2(3H)-Benzofuranone, 3-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
furanylidene]-5,6-dihydroxy-, (3E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

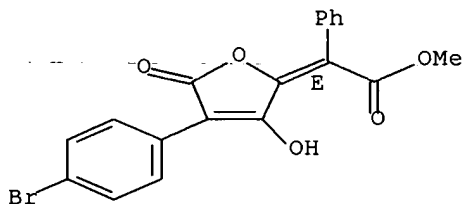


L9 ANSWER 166 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1970:434988 CAPLUS  
 DN 73:34988  
 TI Bromopulvinic acid derivatives  
 AU Bhutani, S. P.; Chibber, Shyam S.; Seshadri, Tiruvenkata R.  
 CS Dep. Chem., Univ. Delhi, Delhi, India  
 SO Indian Journal of Chemistry (1970), 8(5), 406-9  
 CODEN: IJOCAP; ISSN: 0019-5103  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB Methanolysis of p-bromopulvinic dilactone yields two esters, which are not geometrical isomers but position isomers, 4-bromovulpinic acid (I) and 4'-bromovulpinic acid (II). The structures of these have been established by ozonolysis. Condensation of o-phenylenediamine with I, II, p-bromopulvinic dilactone, and 4'-bromopulvinic acid yields the same mixt. of two components; they arise from the intermediate dilactone by the opening of the two lactone rings independently.  
 IT **27394-68-9P 27394-71-4P 27394-73-6P 27394-75-8P**  
 RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)  
 RN 27394-68-9 CAPLUS  
 CN .DELTA.2(5H),.alpha.-Furanacetic acid, 4-(p-bromophenyl)-3-hydroxy-5-oxo-oxo-.alpha.-phenyl- (8CI) (CA INDEX NAME)



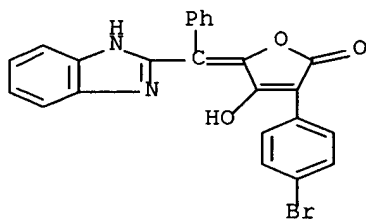
RN 27394-71-4 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(4-bromophenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



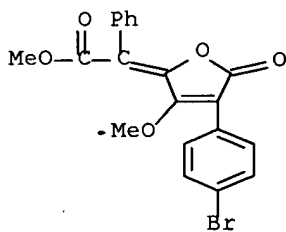
RN 27394-73-6 CAPLUS

CN 2(5H)-Furanone, 5-(.alpha.-2-benzimidazolylbenzylidene)-3-(p-bromophenyl)-4-hydroxy- (8CI) (CA INDEX NAME)

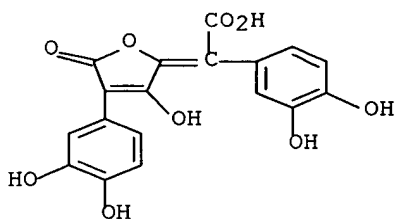


RN 27394-75-8 CAPLUS

CN .DELTA.2(5H),.alpha.-Furanacetic acid, 4-(p-bromophenyl)-3-methoxy-5-oxo-.alpha.-phenyl-, methyl ester (8CI) (CA INDEX NAME)



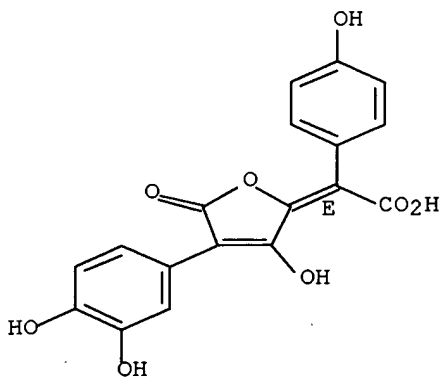
L9 ANSWER 167 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1969:488706 CAPLUS  
 DN 71:88706  
 TI Fungus pigments. III. Xerocomic acid and gomphidic acid, two chemotaxonomically interesting pulvinic acid derivatives from *Gomphidius glutinosus*  
 AU Steglich, Wolfgang; Furtner, Willibard; Prox, Axel  
 CS Tech. Hochsch. Muenchen, Munich, Fed. Rep. Ger.  
 SO Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische Chemie, Biochemie, Biophysik, Biologie (1969), 24(7), 941-2  
 CODEN: ZENBAX; ISSN: 0044-3174  
 DT Journal  
 LA German  
 GI For diagram(s), see printed CA Issue.  
 AB The isolation of xerocomic acid, (I) variegatic acid (II) and gomphidic acid (III) from the basidiomycete *G. glutinosus* by preparative thin-layer chromatog. on Kieselgel G in benzene-Et formate-CO<sub>2</sub>H<sub>2</sub> (13:5:4) is described. In I and III the substitutions on the benzene nuclei may be exchanged. Warming of III with Ac<sub>2</sub>O gave the cryst. lactone tetraacetate (IV), which differed in m.p. and ir spectrum from the corresponding lactone of II. The structure of II could be elucidated by mass spectrography and by synthesis from the intermediate 2-(3,4,5-trimethoxyphenyl)-5-(4-methoxyphenyl)-3,4-dioxoadiponitrile. The latter, whose synthesis is not described, has been sapond. with HBr-AcOH (5 days; 100.degree.), and III has been isolated from the reaction mixt. by thin-layer chromatog. in 10% yield. Its lactone tetraacetate was identical with IV in m.p., mixt.-m.p., ir and mass spectra.  
 IT 15404-65-6 25287-88-1 25328-77-2  
 RL: BIOL (Biological study)  
 (from *Gomphidius glutinosus*)  
 RN 15404-65-6 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-3,4-dihydroxy- (9CI) (CA INDEX NAME)



RN 25287-88-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanylidene]-4-hydroxy-, (.alpha.E)- (9CI) (CA INDEX NAME)

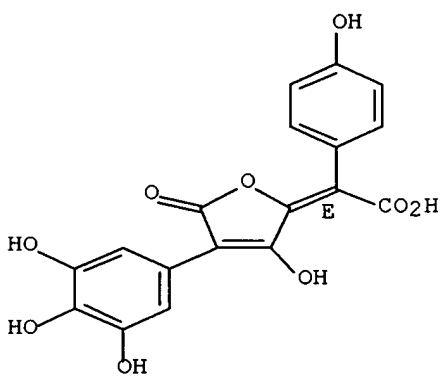
Double bond geometry as shown.





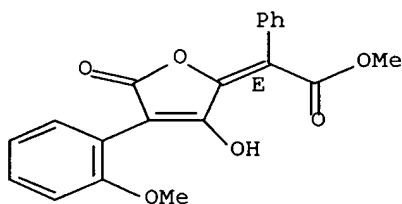
RN 25328-77-2 CAPLUS  
 CN Benzeneacetic acid, 4-hydroxy-.alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trihydroxyphenyl)-2(5H)-furanylidene]-, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



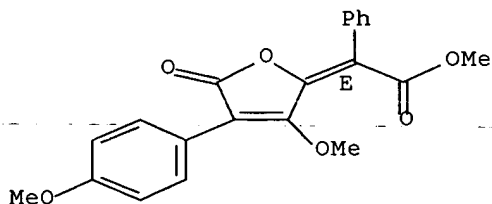
L9 ANSWER 168 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1969:71941 CAPLUS  
 DN 70:71941  
 TI Chemistry of lichen constituents. VII. Mass spectra of some pulvic acid derivatives  
 AU Letcher, R. M.  
 CS Univ. Coll. Rhodesia, Salisbury, Rhodesia  
 SO Organic Mass Spectrometry (1968), 1(6), 805-17  
 CODEN: ORMSBG; ISSN: 0030-493X  
 DT Journal  
 LA English  
 AB The mass spectra of 3 methoxypulvic dilactones, 4 Me esters of methoxypulvic acids, and 5 Me ethers of pulvic acid derivs. have been measured and rationalized by employing accurate mass measurements and metastable peak assignments to substantiate the proposed fragmentations and rearrangements. In particular, the mass spectral differences and similarities between the isomeric methoxypulvic dilactones, between their methanolysis products, and between the isomeric Me ethers, are rationalized.  
 IT 22628-19-9 22628-21-3 22736-30-7  
 RL: PRP (Properties)  
 (mass spectrum of)  
 RN 22628-19-9 CAPLUS  
 RN 22628-21-3 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(2-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 22736-30-7 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 169 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1969:28584 CAPLUS

DN 70:28584

TI Constituents of the higher fungi. VIII. Blueing of Boletus species. Variegatic acid, a hydroxytetronic acid from Boletus species and a reassessment of the structure of boletol

AU Beaumont, P. C.; Edwards, Raymond Leslie; Elsworthy, G. C.

CS Univ. Bradford, Bradford, UK

SO Journal of the Chemical Society [Section] C: Organic (1968), (24), 2968-74

CODEN: JSOOAX; ISSN: 0022-4952

DT Journal

LA English

AB Four Boletus species contain a new tetronic acid, variegatic acid, which was identified as 3,3', 4,4'-tetra-hydroxypulvinic acid, which is responsible for the bluing reaction in these species.

IT 15404-65-6P 20915-96-2P 20915-97-3P

20916-00-1P 20916-01-2P 20916-03-4P

20916-05-6P 20916-06-7P 20916-08-9P

20916-09-0P 20916-10-3P 20916-12-5P

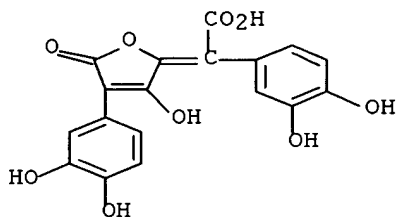
20988-31-2P 20988-32-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 15404-65-6 CAPLUS

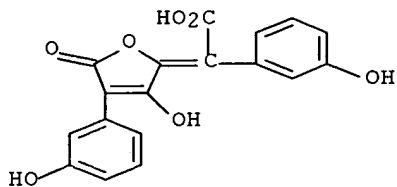
CN Benzenecetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-

furanylidene]-3,4-dihydroxy- (9CI) (CA INDEX NAME)



RN 20915-96-2 CAPLUS

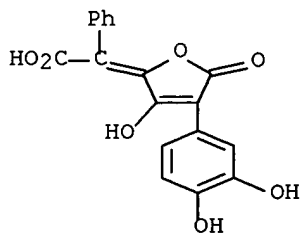
CN .DELTA.2(5H),.alpha.-Furanacetic acid, 3-hydroxy-.alpha.,4-bis(m-hydroxyphenyl)-5-oxo- (8CI) (CA INDEX NAME)



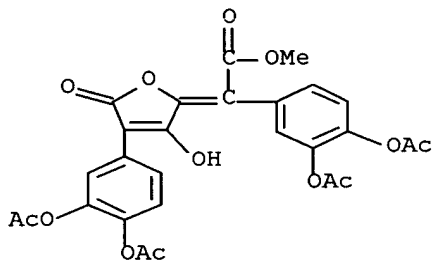
RN 20915-97-3 CAPLUS

CN .DELTA.2(5H),.alpha.-Furanacetic acid, 4-(3,4-dihydroxyphenyl)-3-hydroxy-5-

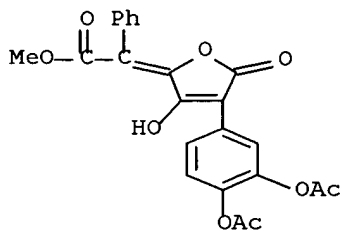
oxo-.alpha.-phenyl- (8CI) (CA INDEX NAME)



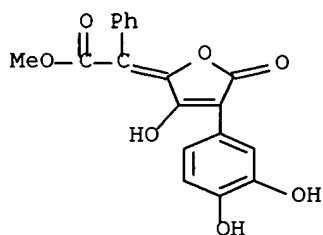
RN 20916-00-1 CAPLUS  
 CN .DELTA.2(5H),.alpha.-Furanacetic acid, .alpha.,4-bis(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-, methyl ester, .alpha.,.alpha.,4,4-tetraacetate (8CI)  
 (CA INDEX NAME)



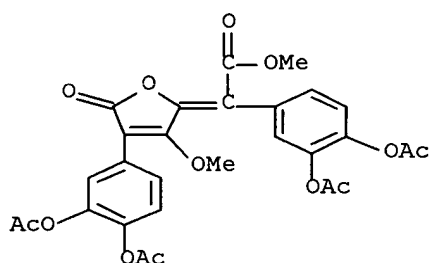
RN 20916-01-2 CAPLUS  
 CN .DELTA.2(5H),.alpha.-Furanacetic acid, 4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-.alpha.-phenyl-, methyl ester, 4,4-diacetate (8CI) (CA INDEX NAME)



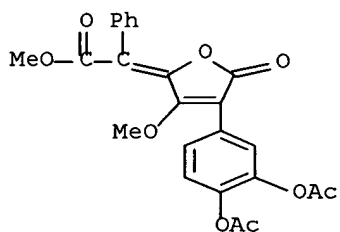
RN 20916-03-4 CAPLUS  
 CN .DELTA.2(5H),.alpha.-Furanacetic acid, 4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-.alpha.-phenyl-, methyl ester (8CI) (CA INDEX NAME)



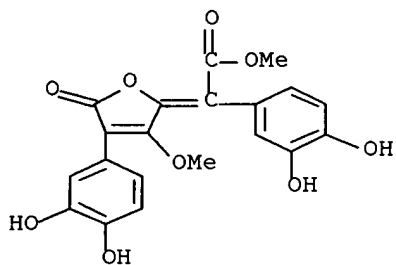
RN 20916-05-6 CAPLUS  
 CN .DELTA.2(5H),.alpha.-Furanacetic acid, .alpha.,4-bis(3,4-dihydroxyphenyl)-3-methoxy-5-oxo-, methyl ester, tetraacetate (8CI) (CA INDEX NAME)



RN 20916-06-7 CAPLUS  
 CN .DELTA.2(5H),.alpha.-Furanacetic acid, 4-(3,4-dihydroxyphenyl)-3-methoxy-5-oxo-.alpha.-phenyl-, methyl ester, diacetate (8CI) (CA INDEX NAME)



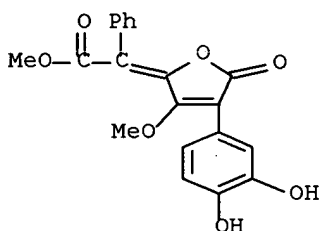
RN 20916-08-9 CAPLUS  
 CN .DELTA.2(5H),.alpha.-Furanacetic acid, .alpha.,4-bis(3,4-dihydroxyphenyl)-3-methoxy-5-oxo-, methyl ester (8CI) (CA INDEX NAME)



RN 20916-09-0 CAPLUS

CN .DELTA.2(5H),.alpha.-Furanacetic acid, 4-(3,4-dihydroxyphenyl)-3-methoxy-5-

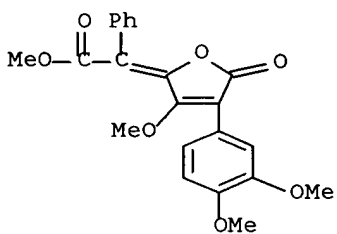
oxo-.alpha.-phenyl-, methyl ester (8CI) (CA INDEX NAME)



RN 20916-10-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-methoxy-5-oxo-2(5H)-

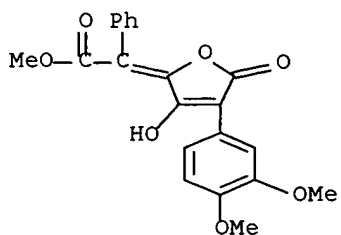
furanylidene]-, methyl ester (9CI) (CA INDEX NAME)



RN 20916-12-5 CAPLUS

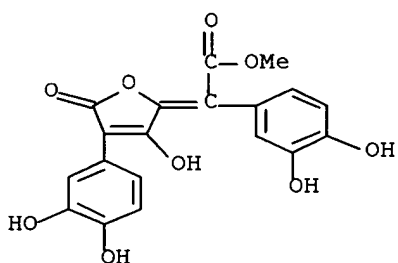
CN .DELTA.2(5H),.alpha.-Furanacetic acid, 4-(3,4-dimethoxyphenyl)-3-hydroxy-5-

oxo-.alpha.-phenyl-, methyl ester (8CI) (CA INDEX NAME)



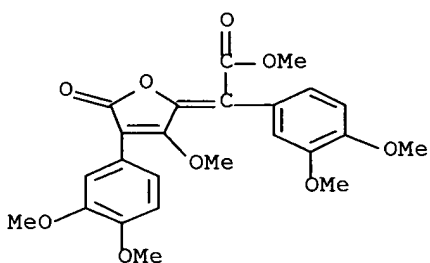
RN 20988-31-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-  
furanylidene]-3,4-dihydroxy-, methyl ester (9CI) (CA INDEX NAME)



RN 20988-32-3 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dimethoxyphenyl)-3-methoxy-5-oxo-2(5H)-  
furanylidene]-3,4-dimethoxy-, methyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 170 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1969:3682 CAPLUS

DN 70:3682

TI New pulvinic acid derivatives from *Xerocomus chrysenteron* and occurrence of anthraquinone pigments in Boletaceae

AU Steglich, Wolfgang; Furtner, Willibald; Prox, Axel

CS Tech. Hochsch. Muenchen, Munich, Fed. Rep. Ger.

SO Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische

Chemie, Biochemie, Biophysik, Biologie (1968), 23(8), 1044-50

CODEN: ZENBAX; ISSN: 0044-3174

DT Journal

LA German

GI For diagram(s), see printed CA Issue.

AB Chromatog. on Al<sub>2</sub>O<sub>3</sub> of EtOH exts. of *Boletus erythropus* and *B. calopus* and

*Xerocomus chrysenteron* fruit-bodies yielded variegatic acid (I, R<sub>1</sub>, R<sub>2</sub> = OH),  $\lambda$ . 275, 415 m. $\mu$ . ( $\epsilon$ . 10,500, 7650) (EtOH). The X. chrysenteron ext. also contained xerocomic acid (I, R<sub>1</sub>, = H, R<sub>2</sub> = OH or

R<sub>1</sub> = OH, R<sub>2</sub> = H) (Ia) m. 295.degree. or 302.degree. (decompn.),  $\lambda$ . 261,

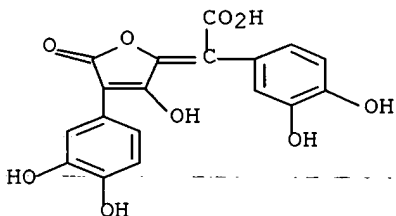
411 m. $\mu$ . ( $\epsilon$ . 10,700, 6700) (EtOH), isolated by thin layer chromatog. Triacetyl-xerocomic acid lactone (II), m. 221-3.degree.,  $\lambda$ . 378 m. $\mu$ . ( $\epsilon$ . 33,500) (Me<sub>2</sub>CO), was prepd. from Ia with Ac<sub>2</sub>O-H<sub>2</sub>SO<sub>4</sub>. Oxidn. of the yellow acids gave deep blue products. Mass spectral data of the acids were interpreted. The structure of Ia was further established by synthesis. NaOEt condensation of p-methoxybenzyl cyanide with Et 3,4-dimethoxyphenylcyanopyruvate gave 88% 3,4-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>C(CN):C(OH)C(OH):C(CN)C<sub>6</sub>H<sub>4</sub>OMe-4 (III), m. 221-3.degree. (decompn.),  $\lambda$ . 348, 418 m. $\mu$ . [ $\epsilon$ . 21,200, 4600 (shoulder)]. III, (2 g.) and 48% HBr in AcOH refluxed 2 hrs. and the product treated with Ac<sub>2</sub>O-H<sub>2</sub>SO<sub>4</sub> yielded 350 mg. II, which was hydrolyzed to Ia. Uv data of the blue oxidn. products are given. The presence of 1,2,3-trihydroxyanthraquinone-5-(and 8-)carboxylic acids in Boletaceae was confirmed.

IT 15404-65-6 23181-75-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
(in *Boletus*)

RN 15404-65-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furan-2-ylidene]-3,4-dihydroxy- (9CI) (CA INDEX NAME)



RN 23181-75-1 CAPLUS



L9 ANSWER 172 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1968:95210 CAPLUS

DN 68:95210

TI Lichen components. XXXI. Mass spectrometry and application to structural

and stereochemical problems. 123. Mass spectrometry of depsides, depsidones, depsones, dibenzofurans, and diphenylbutadienes with positive

and negative ions

AU Huneck, Siegfried; Djerassi, C.; Becher, Dieter; Barber, Margaret; Von Ardenne, M.; Steinfelder, Karl; Tuemmler, Rudolf

CS Tech. Univ. Dresden, Dresden, Fed. Rep. Ger.

SO Tetrahedron (1968), 24(6), 2707-55

CODEN: TETRAB; ISSN: 0040-4020

DT Journal

LA German

AB The comparative mass spectrometry with pos. and neg. ions of depsides, depsidones, depsones, dibenzofurans and diphenylbutadienes are reported. Both methods in most cases give the mole mass and are supplementary because of the different fragmentation. Esp. in depsides it is possible to make structural assignments to the S and A parts of the mol. 30 references.

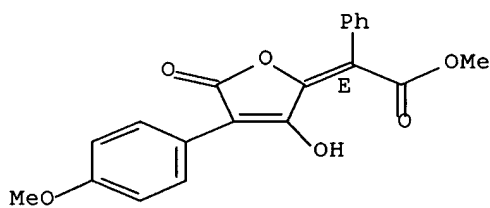
IT 481-64-1

RL: PRP (Properties)  
(mass spectrum of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 173 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1968:21418 CAPLUS

DN 68:21418

TI Chemistry of lichen constituents. IV

AU Letcher, R. M.; Eggers, S. H.

CS Univ. Coll. Rhodesia, Salisbury, UK

SO Tetrahedron Letters (1967), (36), 3541-6

CODEN: TELEAY; ISSN: 0040-4039

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB Characteristic skeletal rearrangements were observed under electron impact conditions in investigations of mass spectra of the pulvic acid derivs.; pulvic acid lactone (I), vulpinic acid (VI, R1 = H, R2 = OMe) (III), pinastric acid VI (R1 = R2 = OMe) (IV), rhizocarpic acid VI (R1 = H, R2 = NHCH(CH2Ph)CO2Me) (V), and calycin (II). All compds. showed prominent mol. ions. The fragmentation of I, m/e 290, 262, 261, 234, 178, 145, 117, 89, and 63 was illustrated. Formation of the base peak at m/r 145 from the mol. ion was rationalized on the basis of the residual original charge on a CO group. A metastable peak at 188.8 indicated that the ion m/e 234 was, in part, formed by a one-step loss of 2 moles CO2, necessitating a skeletal rearrangement to a polyporic acid type of intermediate. III showed a mol. ion at m/e 322 and gave a spectrum virtually identical with that of I. The contribution of peak arising from I was easily recognizable in the spectrum of IV, m/e 352 (M+), base peak m/e 320 (M-32), 290, 264, 208, 175, 147, 145, 119. The spectrum of V is essentially the superimposition of the spectrum PhCH2CH2(NH2)CO2Me on that of I. Fragmentation of VI is somewhat similar to that of I and the spectrum is rationalized more readily on the basis of the given structure than that previously proposed (Akermark, CA 57: 2137h). Formation of ions at m/e 161 and 145 was discussed. The metastable peak at 204.2 corresponded to loss of 2 CO2 from the mol. ion which accordingly also underwent rearrangement.

IT 481-64-1

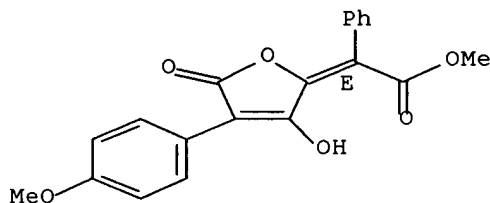
RL: PRP (Properties)

(mass spectrum of)

RN 481-64-1 CAPLUS

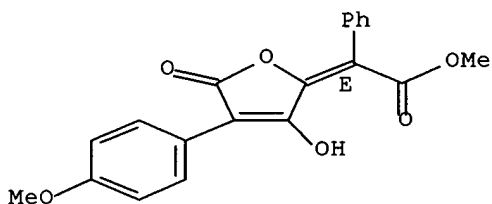
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 174 OF 186 CAPLUS COPYRIGHT 2003 ACS  
AN 1967:497597 CAPLUS  
DN 67:97597  
TI Lichens. IV. Thin-layer chromatography of lichen substances  
AU Santesson, Johan  
CS Univ. Uppsala, Uppsala, Swed.  
SO Acta Chemica Scandinavica (1947-1973) (1967), 21(5), 1162-72  
CODEN: ACSAA4; ISSN: 0001-5393  
DT Journal  
LA English  
AB cf. CA 67: 51056p. The thin-layer chromatography on precoated plates of  
>80 lichen substances is described. 32 references.  
IT **481-64-1**  
RL: ANT (Analyte); ANST (Analytical study)  
(thin-layer chromatog. of)  
RN 481-64-1 CAPLUS  
CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 175 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1967:481910 CAPLUS

DN 67:81910

TI Variegatic acid, a new tetronic acid responsible for the blueing reaction

in the fungus *Suillus variegatus*

AU Edwards, Raymond Leslie; Elsworth, G. C.

CS Univ. Bradford, Bradford, UK

SO Chemical Communications (London) (1967), (8), 373-4

CODEN: CCOMA8; ISSN: 0009-241X

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB The genus *Boletaceae* is closely related to the genus *Paxillaceae* and investigations were directed toward establishing a possible chem.

relation

between them. The sporophore of the basidiomycete *S. variegatus*, which becomes blue on bruising, contains a red H<sub>2</sub>O-sol. acid (I), called variegatic acid. I was isolated as the dilactone tetraacetate (II), decomp. >270.degree., produced by the action of Ac<sub>2</sub>O and H<sub>2</sub>SO<sub>4</sub> on the crude ext. Oxidn. of II with CrO<sub>3</sub> yielded 3,4-(AcO)C<sub>6</sub>H<sub>3</sub>CO<sub>2</sub>H as the

only

aromatic acid. The identity of I and II was confirmed by synthesis. 3,4-(MeO)C<sub>6</sub>H<sub>3</sub>CH<sub>2</sub>CN was condensed with (CO<sub>2</sub>Et)<sub>2</sub> and the product, [COCH(CN)C<sub>6</sub>H<sub>3</sub>(OMe)2-3,4]2, hydrolyzed and demethylated with HI to yield

I,

decomp. >320.degree... A chromatographic comparison of this product

with

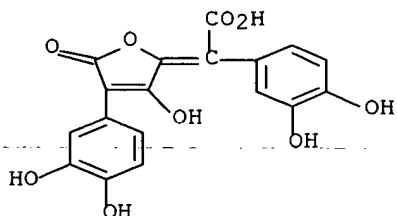
the crude ext. established its identity, and acetylation with Ac<sub>2</sub>O and H<sub>2</sub>SO<sub>4</sub> gave II. I is the 1st example of a tetronic acid isolated from a basidiomycete and presumably represents the oxidn. product of the yet hypothetical 2,5-bis(3,4-dihydroxyphenyl)-3,6-dihydroxybenzoquinone. In addn. I constitutes a link (although the substitution pattern is different) in the chem. possible conversion of dihydroxyphenylbenzoquinones, e.g. atromentin (IV), into diphenylcyclopentenones, e.g. involutin (V), both of which have been isolated from members of the *Paxillus* genus.

IT 15404-65-6

RL: RCT (Reactant); RACT (Reactant or reagent)  
(in *Suillus variegatus*)

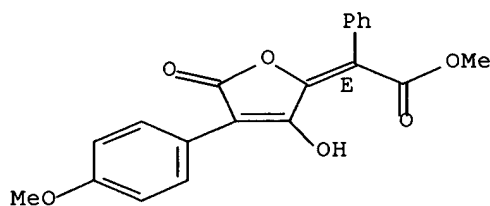
RN 15404-65-6 CAPLUS

CN Benzeneacetic acid, .alpha.-[4-(3,4-dihydroxyphenyl)-3-hydroxy-5-oxo-2(5H)-furanlydene]-3,4-dihydroxy- (9CI) (CA INDEX NAME)



L9 ANSWER 176 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1966:45868 CAPLUS  
 DN 64:45868  
 OREF 64:8635g-h  
 TI Chemistry of lichens. XXIII. Thin-layer chromatography of pulvic acid derivatives  
 AU Bendz, Gerd; Santesson, Johan; Wachtmeister, Carl Axel  
 CS Univ. Uppsala, Swed.  
 SO Acta Chemica Scandinavica (1965), 19(7), 1776-7  
 CODEN: ACHSE7; ISSN: 0904-213X  
 DT Journal  
 LA English  
 AB Pulvic acid derivs. were sepd. by thin-layer chromatography on Silica gel  
 G, using 4 solvent systems. The Rf values and colors were: Pulvic acid, A, 03-04, Rf X 100 in solvent system: B, 16-18, C, 01, D, 00, Color of the spot, visible light, yellow, uv 365 m.mu., yellow; Pulvic dilactone, 79-82, 75-77, 70-73, 84-85, yellow, yellow; Calycin, 30-33, 59-60, 19-20, 16-19, orange red, dark brown red; Vulpic acid, 12-14, 32-33, 12-14, 12-13, yellow, orange yellow; Pinastric acid, 18-20, 33-35, 22-24, 18-20, yellow, orange; Rhizocarpic acid, 66-69, 69-71, 58-60, 60-62, yellow, orange; Epanorin, 70-72, 73-76, 61-64, 55-56, yellow, orange(yellow); A: Me2CO-CHCl3 1:1, , , , , ; B: Me2CO-CHCl3-EtOH (99.5%) 4:4:1, , , , , ; C: Me2CO-CHCl3 1:3, , , , , ; D: Me2CO-pyridine 24:1, , , , , ;  
 IT **481-64-1**, Pinastric acid  
 (chromatography of)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanlydene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 177 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1964:67971 CAPLUS

DN 60:67971

OREF 60:11935c-h,11936a-d

TI A reinvestigation of the structure of pinastric acid and isopinastric acid

AU Agarwal, S. C.; Seshadri, T. R.

CS Univ. Delhi

SO Indian J. Chem. (1964), 2(1), 17-22

DT Journal

LA Unavailable

GI For diagram(s), see printed CA Issue.

AB The crude acid product (I) (0.5 g.) obtained by hydrolysis of a crude mixt. of 2-(p-methoxy- phenyl)-5-phenyl-3,4-dioxoadipodinitrile (Asano and

Kameda, CA 29, 1398) following the method of A. and K. (loc. cit.) was methylated with an ice-cold ethereal soln. of CH<sub>2</sub>N<sub>2</sub> 2 hrs. The product on

chromatography in C<sub>6</sub>H<sub>6</sub> over Al<sub>2</sub>O<sub>3</sub> gave 0.28 g. (from the 1st 5 fractions)

of a yellow product, m. 120-4.degree., which was refluxed 1 hr. with 5 ml.

dry C<sub>5</sub>H<sub>5</sub>N, the soln. acidified, and the product obtained fractionally crystd. from MeOH to give 0.05 g. pinastric acid (II) (m. 200-2.degree.),

0.02 g. Me 4,4'-dimethoxypulvinate (III) (m. 173-5.degree.), and 0.14 g. impure II; the sixth fraction gave 0.01 g. III. I (0.5 g.) was refluxed 0.5 hr. with 8 ml. Ac<sub>2</sub>O, the soln. cooled, and the sepd. product washed with petr. ether, boiled with C<sub>6</sub>H<sub>6</sub>, and filtered off to give 0.08 g. 4,4'-dimethoxypulvinic dilactone (IV), m. >250.degree. (IV on

methanolysis

yielded III). The filtrate on concn. gave 0.26 g. 4-methoxypulvinic dilactone (V), m. 194-6.degree. (C<sub>6</sub>H<sub>6</sub>). The product obtained by methanolysis of 0.5 g. V was boiled with 20 ml. MeOH and filtered off to give 0.13 g. II. Concn. of the filtrate gave 0.34 g. isopinastric acid (VI), m. 127-9.degree. (MeOH). Treatment of VI with ethereal CH<sub>2</sub>N<sub>2</sub>

contg.

a trace of MeOH 1 hr. gave pure VI Me ester, m. 173-5.degree. (MeOH). Redn. of 0.5 g. II with 0.6 g. Zn dust and 6 ml. HOAc gave 4'-methoxyhydrocornicularate (VII) as an oily residue in the neutral fraction; semicarbazone m. 142-3.degree. (MeOH). Mixed m.p. with authentic VII semicarbazone undepressed; mixed m.p. with Me 4-methylhydrocornicularate (VIII) semicarbazone was considerably depressed. Similar redn. of 0.4 g. VI with 0.8 g. Zn dust in 10 ml.

HOAc

1.5 hrs. gave a product which was sepd. into alk. sol. and neutral fractions. The alk. sol. fraction (0.08 g.) m. 217-18.degree.

(decompn.)

(EtOH-petr. ether); it gave a violet FeCl<sub>3</sub> reaction which intensified on diln. with H<sub>2</sub>O;  $\lambda_{\text{max}}$  MeOH 222 and 264 m. $\mu$ ;  $\nu$  (KBr) shoulders at 3077, 1724, 1653; and 1517 cm.<sup>-1</sup>; it gave effervescence in NaHCO<sub>3</sub> soln. The neutral oily portion gave a semicarbazone, which on fractional

crystn.

from MeOH gave the following fractions: (i) 0.02 g. product, m. 178-9.degree.; mixed m.p. with the higher m. semicarbazone (182-

3.degree.)

of VIII was undepressed; (ii) an indefinite product, m. 130-53.degree.,

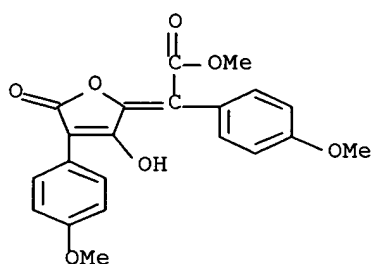
and (iii) 0.1 g. product, m. 144-5.degree.; mixed m.p. with the lower melting (146-7.degree.) semicarbazone of VIII was undepressed. VIII was synthesized as follows; 1-(p-methoxyphenyl)-4-phenyl-1,3-butadiene-1-carboxylic acid (IX) (19.5 g.), m. 209-10.degree., was obtained from 20.2 g. PhCH:CHCHO, 25 g. p-MeOC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CO<sub>2</sub>Na, and 60 ml. Ac<sub>2</sub>O; using the method of A. and K. (loc. cit.), p-Monomethoxydiphenylbutadiene (4.5 g.) was obtained as a by-product, m. 158-9.degree. (EtOH). Methylation of IX with Me<sub>2</sub>SO<sub>4</sub> and NaHCO<sub>3</sub> in Me<sub>2</sub>CO gave the Me ester, m. 80-2.degree.. Redn. of 14 g. IX with Na-Hg gave 12 g. 1-(p-methoxyphenyl)-4-phenyl-2-butene-1-carboxylic acid (X), m. 78-9.degree.. Br (2.8 g.) in 15 ml. HOAc was added slowly with shaking to a soln. of 5 g. X (temp. <10.degree.). After 1.5 hr., Na<sub>2</sub>SO<sub>4</sub> soln. was added, the mixt. extd. with ether, and the ext. dried and concd, to give p-MeOC<sub>6</sub>H<sub>4</sub>C(CO<sub>2</sub>H):CHCHBrCH<sub>2</sub>Ph (XI), m. 135-6.degree. (MeOH). The ethereal filtrate on evapn. gave more XI and a dibromo compd. (XII), m. 223-4.degree. (EtOH). XI (0.8 g.) in 12 ml. abs. EtOH was refluxed 6 hrs. with 0.6 g. fused NaOAc. Addn. of 50 ml. 1% Na<sub>2</sub>CO<sub>3</sub> soln. gave 1-(p-methoxyphenyl)-3-benzylcrotonolactone (XIII), m. 103-4.degree. (MeOH). Similar treatment of a mixt. of XI and XII also furnished XIII. Refluxing 0.55 g. XIII with 5 ml. 10% methanolic KOH 3 hrs. gave 0.3 g. 1-(p-methoxyphenyl)-4-phenyl-3-oxobutane-1-carboxylic acid (XIV), m. 148-9.degree.. Methylation of XIV either with Me<sub>2</sub>SO<sub>4</sub> and NaHCO<sub>3</sub> in Me<sub>2</sub>CO or with ice-cold ethereal CH<sub>2</sub>N<sub>2</sub> gave VIII, m. 52-3.degree. (MeOH). VIII gave a semicarbazone, which on fractional crystn. from MeOH yielded following 3 fractions: A, m. 182-3.degree.; indefinite, m. 142-60.degree.; B, m. 146-7.degree.; mixed m.p. of A and B was 142-6.degree.. On the basis of infrared data, A and B were assigned the syn and anti configurations, resp. VII was synthesized in a similar way. 1-Phenyl-4-(p-methoxyphenyl)-1,3-butadiene-1-carboxylic acid (XV) (28.5 g.) (m. 193-4.degree.) was prepd. from 25.5 g. p-MeOC<sub>6</sub>H<sub>4</sub>CH:CHCHO, 28.5 g. PhCH<sub>2</sub>CO<sub>2</sub>Na, and 60 ml. Ac<sub>2</sub>O. The KOH-insol. portion (4.7 g.) was identified as p-monomethoxydiphenylbutadiene, m. 158-9.degree. (EtOH). XV Me ester m. 80-2.degree.. Redn. of 20 g. XV as for X gave 20 g. 1-phenyl-4-(p-methoxyphenyl)-2-butene-1-carboxylic acid (XVI), m. 90-2.degree.. Bromination of 17 g. XVI in 85 ml. glacial HOAc with 10 g. Br as for X gave 0.5 g. monobromo compd., m. 146-8.degree. (decompn.) (MeOH), 15.5 g. dibromo compd. (XVII) (noncryst.), and 0.5 g. 1-phenyl-3-(p-methoxybenzyl) crotonolactone (XVIII), m. 114-16.degree. (EtOH). XVII (14 g.) in 230 ml. abs. EtOH was refluxed 6 hrs. with 12 g. fused NaOAc and worked up as for XI to give 3.5 g. XVIII. Hydrolysis of 2.15 g. XVIII with 15 ml. 10% methanolic KOH by refluxing 3 hrs. afforded 1.2 g. 1-phenyl-4-(p-methoxyphenyl)-3-oxobutane-1-carboxylic acid (XIX), m. 93-4.degree. (CS<sub>2</sub>). Methylation of 0.73 g. XIX with ice-cold ethereal

CH<sub>2</sub>N<sub>2</sub> (from 0.9 g. nitrosomethylurea) gave VII, m. 56.5-7.5.degree.; VII gave semicarbazone C, m. 145-6.degree. (MeOH), which, on the basis of infrared spectra, was assigned the anti configuration. It was thus established that II and VI are position isomers, having the OMe groups in different Ph rings. Based on the study of their infrared spectra, both II and VI were assigned the trans-trans configuration. Infrared and ultraviolet spectral data were given.

IT **100169-40-2**, 2,4-Hexadienedioic acid, 3,4-dihydroxy-2,5-bis(p-methoxyphenyl)-, .gamma.-lactone, Me ester  
(prepn. of)

RN 100169-40-2 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]-4-methoxy-, methyl ester (9CI) (CA INDEX NAME)

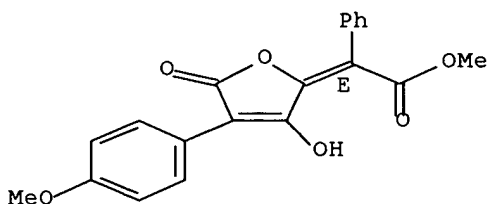


IT **481-64-1**, Pinastric acid  
(structure of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furan-2-ylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.





L9 ANSWER 178 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1964:38556 CAPLUS

DN 60:38556

OREF 60:6778a-e

TI Application of ozonolysis to the study of substituted derivatives of vulpinic acid. Constitution of pinastric and isopinastric acids

AU Agarwal, S. C.; Seshadri, T. R.

CS Univ. Delhi, India

SO Tetrahedron (1963), 19(12), 1965-8

DT Journal

LA Unavailable

GI For diagram(s), see printed CA Issue.

AB cf. CA 54, 505i. The final stage in the elucidation of the structure of unsym. derivs. of vulpinic acid (I, R = R' = H) (II) is the location of the substituent group in either of the 2 phenyl rings with reference to the CO<sub>2</sub>Me group. A stream of 3% ozonized O bubbled through (at 150 ml./min.) 1.0 g. II in dry EtOAc at -15.degree. 30 min. and the cold, almost colorless soln. hydrogenated 15 min. at 1 atm. (0.8 g. 5% Pd-C)

in

20 ml. EtOAc and worked up yielded benzoylformic acid (as 2,4-dinitrophenylhydrazone, m. 194-6.degree.) (Me benzoylformate oxime

m.

138-9.degree.). The ozonolysis repeated and the ozonide decompd. and worked up differently yielded (CO<sub>2</sub>H)<sub>2</sub>. The formation of BzCO<sub>2</sub>Me

suggested

that the ozonolysis could differentiate between the 2 phenyl groups and could be used to locate the position of the nuclear MeO group in

pinastric

I (R = H, R' = MeO) (III) and isopinastric I (R = MeO, R' = H) (IV)

acids.

III (0.74 g.) in 175 ml. dry EtOAc ozonized 55 min., the acid fraction boiled with 4 ml. H<sub>2</sub>O with decolorizing C, the filtered soln. cooled and filtered from p-MeOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H (m. 181-2.degree.), the mother liquor extd. with Et<sub>2</sub>O, and the ext. evapd. yielded p-MeOC<sub>6</sub>H<sub>4</sub>COCO<sub>2</sub>H (V); it gave no BzOH on vacuum sublimation, and yielded CO and p-MeOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H on

treatment

with hot H<sub>2</sub>SO<sub>4</sub>; 2,4-dinitrophenylhydrazone m. 195-7.degree. (decompn.); semicarbazone m. 198-9.degree. (decompn.) (MeOH). The neutral fraction gave yellow oily BzCO<sub>2</sub>Me; oxime, m. 124-5.degree. (C<sub>6</sub>H<sub>6</sub>-ligroine); 2,4-dinitrophenylhydrazone m. 171-3.degree. (alc.). IV (0.37 g.) in 35 ml. EtOAc ozonized, the oily acid fraction treated with 5 ml. ice-cold

H<sub>2</sub>O

and filtered, the dried (P<sub>2</sub>O<sub>5</sub>) residue sublimed in vacuo at 80.degree.

to

give BzOH, the residue crystd. from H<sub>2</sub>O to yield p-MeOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H, and the mother liquor extd. 4 times with 40 ml. Et<sub>2</sub>O gave BzCO<sub>2</sub>H, characterized

as

the 2,4-dinitrophenylhydrazone, m. 193-5.degree. (decompn.). The EtOAc soln. contg. the neutral fraction dried (MgSO<sub>4</sub>) and evapd. in vacuo gave oily p-MeOC<sub>6</sub>H<sub>4</sub>COCO<sub>2</sub>Me; oxime m. 81-3.degree. (ligroine). Alk.

hydrolysis

gave p-MeOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H. The results confirmed the position isomer

structures

previously assigned to III and IV.

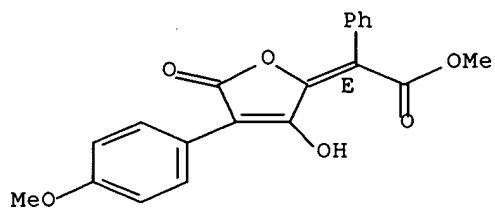
IT 481-64-1, Pinastric acid

(structure of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 179 OF 186 CAPLUS COPYRIGHT 2003 ACS  
AN 1960:117966 CAPLUS  
DN 54:117966

OREF 54:22488d-i,22489a-e

TI Bromo derivatives of pulvinic acid

AU Grover, P. K.; Seshadri, T. R.

CS Univ. Delhi, India

SO J. Chem. Soc. (1960) 2134-8

DT Journal

LA Unavailable

AB Bromination of pulvinic acid (trans-trans-form) (I) gave the 4'-Br deriv.

(II). The isomeric 4-Br compd. (III) was also synthesized. II and III gave on dehydration the same dilactone (IV), which with MeOH-KOH afforded

Me esters (V) (VI) of trans-trans- and cis-trans-4-bromopulvinic acid. The constitution of the bromo acids was estd. by 2 methods. The stereochem. was deduced from the relative solubilities and ultraviolet absorption spectra of the isomers. Br (1 cc.) added to 5 g. I in 100 cc.

CHCl<sub>3</sub>, the mixt. left 24 hrs. at room temp., and evapd. in vacuo gave 3.8

g. II, yellow leaflets, m. 207-8.degree. (AcOH). II (0.6 g.), 1.2 g. KMnO<sub>4</sub>, and 0.6 g. anhyd. Na<sub>2</sub>CO<sub>3</sub> in 60 cc. H<sub>2</sub>O was refluxed 2 hrs., cooled,

acidified, SO<sub>2</sub> passed in, and the p-bromobenzoic acid (VII) collected, m.

250-1.degree.. Extn. of the filtrate gave BzOH. II (1 g.), 0.5 g. o-C<sub>6</sub>H<sub>4</sub>(NH<sub>2</sub>)<sub>2</sub>, and 25 cc. PhNMe<sub>2</sub> heated 4 hrs. at 200.degree., the mixt. cooled, poured into dil. HCl, and the product collected gave 0.39 g. 2-{.alpha.-[4-(p-bromophenyl)-2,5-dihydro-3-hydroxy-5-oxo-2-furylidene]benzyl}benzimidazole (VIII), orange rhombohedral plates, m. 332-4.degree. (decompn.) (EtOAc-ligroine). VIII (0.3 g.) refluxed 5 hrs.

with 10 cc. 15% alc.-KOH, the insol. K salts collected, most of the alc. removed, 30 cc. cold H<sub>2</sub>O added, and the solid sepd. gave 2-benzylbenzimidazole, plates, m. 185-7.degree. (EtOAc-ligroine). II or III (100 mg.) refluxed 0.5 hr. with 5 cc. Ac<sub>2</sub>O, the soln. cooled, and the

solid collected gave 85 mg. IV, lemon-yellow prisms, m. 210-12.degree. (C<sub>6</sub>H<sub>6</sub>). Na (1.3 g.) in 15 cc. alc. treated with 20 cc. (CO<sub>2</sub>Et)<sub>2</sub> and 12 g.

4-bromobenzyl cyanide, the mixt. refluxed 1.5 hrs., dild. with H<sub>2</sub>O, and acidified gave 18 g. Et .alpha.-(p-bromophenyl)-.alpha.-cyanopyruvate (IX), m. 146-7.degree. (CS<sub>2</sub>). Na (0.9 g.) in 15 cc. alc. and 8 g. IX refluxed 2 hrs. with 4.8 cc. PhCH<sub>2</sub>CN, the soln. acidified, and the solid collected gave 2.9 g. .alpha.-(p-bromophenyl)-.beta.,.beta.'-dioxo-.alpha.'-phenyladipodinitrile (X), orange leaflets, m. m. 272-3.degree. (decompn. from 257.degree.). X (1 g.), 16 cc. AcOH, 8 cc. concd. H<sub>2</sub>SO<sub>4</sub>, and 10 cc. H<sub>2</sub>O refluxed 2 hrs., the soln. cooled, dild. with H<sub>2</sub>O,

stirred, and the solid collected gave 0.30 g. III, m. 212-13.degree. (AcOH). III was obtained when Me ester of III or p-bromopulvinic dilactone was hydrolyzed with 2% aq. Ba(OH)<sub>2</sub> or 2% aq. NaOH, resp. III with KMnO<sub>4</sub> under

the conditions mentioned above yielded BzOH and VII. III (1 g.), 0.5 g. o-C<sub>6</sub>H<sub>4</sub>(NH<sub>2</sub>)<sub>2</sub>, and 25 cc. PhNMe<sub>2</sub> heated 4 hrs. at 200.degree. and worked

up

as before gave 0.35 g. 2-[4-bromo-.alpha.-(2,5-dihydro-3-hydroxy-5-oxo-

4-

phenyl-2-furylidene)benzyl]benzimidazole (XI), deep orange rhombohedral prisms, m. 346-8.degree. (decompn.) (EtO-Acligroine). XI (0.3 g.) refluxed with alkali as above gave 2-(4-bromobenzyl)benzimidazole (XII), m. 212-13.degree. (EtOAc-ligroine). o-C6H4(NH2)2 and p-

bromophenylacetic

acid heated 2 hrs. at 180.degree. gave XII. IV (1 g.), 0.48 g. p-C6H4(NH2)2, and 25 cc. PhNHMe2 refluxed 4 hrs. and worked up as above gave 0.4 g. XI; treatment with alkali gave XII. IV (1 g.) in 200 cc. 2

%

abs. MeOH-KOH set aside 0.5 hr. at room temp., dild. with 200 cc. H2O, acidified with HCl, the yellow solid treated with aq. NaHCO3, and the residue fractionally crystd. gave Me cis-trans-4-bromopulvinate Me ester (XIII), broad prisms, m. 154-6.degree. (C6H6-ligroine). XIII was

obtained

when VI was treated with excess MeI. The 2nd fraction gave Me trans-trans-4-bromopulvinate Me ester (XIV), m. 110-12.degree.. XIV was also obtained when V or III was methylated with excess MeI. The soln. acidified and the ppt. collected and crystd. gave as 1st fraction VI, m. 180-2.degree.. The 2nd fraction gave V, yellow plates, m. 126-

8.degree..

VI with 2% aq. Ba(OH)2 yielded the trans-cis-acid, m. 226-8.degree.. V and VI with o-C6H4(NH2)2 gave XII, and thence XII. V (0.4 g.) in 200

cc.

alc. was treated 30.hrs. at room temp. with 1 g. satd. NaIO4, the alc. removed in vacuo, H2O added, the soln. extd. with Et2O, and extd. with

aq.

NaHCO3 (soln. A); subsequent extn. with 1% aq. NaOH did not remove any substance. The Et2O contg. the neutral fraction gave an oil which on hydrolysis with 20 cc. 5% NaOH, acidification, and Et2O extn. gave a semisolid, which was converted into p-bromophenylacetamide, m. 192-4.degree.. Fraction A on acidification and extn. with Et2O gave a semisolid. A portion on sublimation gave BzOH. The crude product on paper chromatography with BuOH satd. with NH3 showed 2 rings identical with those of BzOH and (CO2H)2, resp. II (1 g.) in Me2CO heated 3 hrs. with 0.27 cc. Me2SO4 and K2CO3 gave Me trans-trans-4'-bromopulvinate

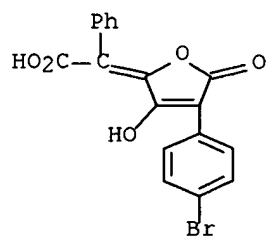
(XV),

yellow needles, m. 130-2.degree. (MeOH). XV (0.4 g.) in 200 cc. alc. treated with 5 moles NaIO4 gave a fraction of VII, sol. in NaHCO3; the neutral fraction with aq. alkali gave phenylacetic acid; p-toluidide m. 134-6.degree..

IT 27394-68-9, .DELTA.2(5H), .alpha.-Furanacetic acid,  
4-(p-bromophenyl)-3-hydroxy-5-oxo-.alpha.-phenyl-  
(stereoisomers)

RN 27394-68-9 CAPLUS

CN .DELTA.2(5H), .alpha.-Furanacetic acid, 4-(p-bromophenyl)-3-hydroxy-5-oxo-.alpha.-phenyl- (8CI) (CA INDEX NAME)



(stereoisomers Me esters

L9 ANSWER 180 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1960:50205 CAPLUS

DN 54:50205

OREF 54:9830i,9831a-d

TI Chemical investigation of Indian lichens. XXIII. Imperfect lichens

AU Grover, P. K.; Seshadri, T. R.

CS Univ. Delhi

SO J. Sci. Ind. Research (India) (1959), 18B, 238-40

DT Journal

LA Unavailable

GI For diagram(s), see printed CA Issue.

AB cf. C.A. 53, 22260e. The four lichens *Lepraria candelaris*, *Candelaria concolor*, *Biatera lucida*, and *Lepraria chlorina* were studied, and their organic components identified and characterized. *L. candelaris*, collected from the Botanical Gardens of Ootacamund, powdery orange, was extd. with cold ligroine (40-60.degree.) and the exts. concd. to give an orange solid which, crystd. from ether-ligroine, gave orange rectangular plates, m. 203-5.degree., of pinastric acid, p-MeOC<sub>6</sub>H<sub>4</sub>C(CO<sub>2</sub>Me):C.C(OH):CPh.CO.O. *C. concolor* from Yarikah Farm (Kashmir), powdery orange, when treated with ligroine (40-60.degree.) yielded yellow needles, m. 223-5.degree., of pulvinic dilactone. *B. lucida* from Chaubatia and Ranikhet, Kumaon Hills, powdery yellow, when extd. with ligroine yielded a yellow-orange solid which was dissolved in ether. The ether soln. was extd., with aq. NaHCO<sub>3</sub> and 1% NaOH soln. After acidification of the NaOH soln. and extn. with ether, evapn. of the ether gave orange-red calycin, m. 243-5.degree.. Acidification and working up of the NaHCO<sub>3</sub> soln. gave a solid which . crystd. from MeOH as yellow plates, m. 158-9.degree., of lepraprinic acid, the o-MeO isomer of pinastric acid. *L. chlorina*, a powdery yellow lichen from the Dal Lake (Punjab), yielded upon extn. with ligroine and subsequent concn. of the exts., an orange-yellow solid which was dissolved in ether. The ether soln. was extd. with aq. NaHCO<sub>3</sub> and 1% NaOH soln. Concn. of the remaining ether soln. gave thick yellow prisms, m. 118-20.degree., of lepraprinic acid Me ether, synthesized by refluxing lepraprinic acid 3 hrs. in acetone with excess MeI and K<sub>2</sub>CO<sub>3</sub>. The NaHCO<sub>3</sub> soln. upon acidification yielded lepraprinic acid. The NaOH soln. was acidified, satd. with NaCl, and extd. with ether. Drying and evapg. the solvent gave calycin, m. 243-5.degree..

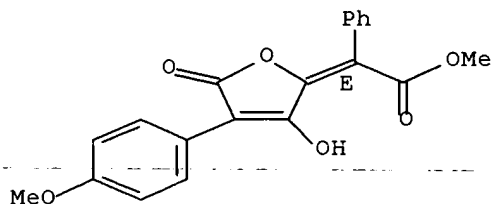
IT 481-64-1, Pinastric acid

(prepn. of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 181 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1960:2190 CAPLUS

DN 54:2190

OREF 54:505i,506a-g

TI Constitution of pinastric acid

AU Grover, P. K.; Seshadri, T. R.

CS Univ. Delhi, India

SO Tetrahedron (1958), 6, 312-14

DT Journal

LA Unavailable

GI For diagram(s), see printed CA Issue.

AB cf. C.A. 51, 14673a. The reactions of pinastric acid (I) (R = H) (II) with o-(H<sub>2</sub>N)2C<sub>6</sub>H<sub>4</sub> (III), PhNMe<sub>2</sub>, and NaIO<sub>4</sub> supported the revised constitution. On the basis of the proposed formula only the ester group is attacked by III in preference to the lactone group and under the

exptl. conditions the hydroxy ester group should not yield a lactone by elimination of MeOH. I (0.1 g.) and 10 ml. PhNMe<sub>2</sub> heated 3 hrs. at 200-10.degree. (oil bath) and the cooled mixt. poured into ice and HCl, filtered and the orange solid crystd. (C<sub>6</sub>H<sub>6</sub>-ligroine) gave authentic II. PhNMe<sub>2</sub> (25 ml.), 1 g. 4-methoxypulvinic dilactone and 0.54 g. o-

(H<sub>2</sub>N)2C<sub>6</sub>H<sub>4</sub>

refluxed 4 hrs. at 200-10.degree. and the cooled mixt. poured onto ice and

HCl, the solid product washed with dil. HCl and H<sub>2</sub>O and the dried material

crystd. (EtOAc-ligroine gave 0.25 g. IV (R = H) (V), m. 292-4.degree. (decompn.), identical with the compd. formed by condensation of II with III. V was also formed when the dilactone was heated with 2 or even 3 moles III. V (0.3 g.) refluxed 5 hrs. in 15 ml. 15% alc. KOH and the filtered soln. evapd. in vacuo gave authentic 2-p-methoxybenzylbenzimidazole (VI), m. 165-7.degree. (EtOAc-petr. ether).

I

(R = Me) (VII) (0.7 g.) and 0.54 g. III refluxed 4 hrs. with 31 ml.

PhNMe<sub>2</sub>

and the product crystd. (EtOAc-petr. ether) gave IV (R = Me) (VIII), m. 284.degree. (decompn.). The presence of 2 MeO groups in VIII showed

that

the ester group alone had reacted and that the lactone ring was not involved. VIII (0.3 g.) refluxed 5 hrs. in 15 ml. 15% alc. KOH and the product crystd. (EtOAc-petr. ether) gave VI. Vulpinic acid (0.5 g.) in 150 ml. alc. kept 39 hrs. at room temp. with 1.65 g. NaIO<sub>4</sub> in H<sub>2</sub>O and

the

alc. evapd. in vacuo, the residue dild. with H<sub>2</sub>O and satd. with NaCl,

the

mixt. extd. repeatedly with Et<sub>2</sub>O and the Et<sub>2</sub>O ext. washed several times with aq. NaHCO<sub>3</sub>, the dried (Na<sub>2</sub>SO<sub>4</sub>) org. layer evapd. and the oily

residue

refluxed 30 min. with 20 ml. 5% NaOH, the cooled soln. acidified with

dil.

HCl and extd. repeatedly with Et<sub>2</sub>O, the ext. evapd. and the product treated with p-MeC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> gave 0.1 g. p-MeC<sub>6</sub>H<sub>4</sub>NHCOCH<sub>2</sub>Ph, m. 135-

6.degree..

The NaHCO<sub>3</sub> washings acidified with dil. HCl and satd. with NaCl, extd. repeatedly with Et<sub>2</sub>O and the dried ext. evapd., part of the product sublimed in vacuo to give BzOH and the remainder paper-chromatographed

at

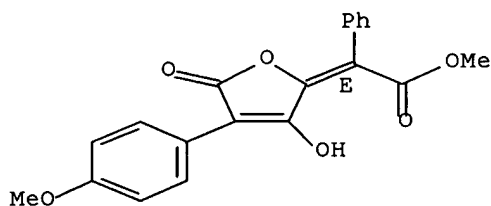
30.degree. in BuOH satd. with NH<sub>4</sub>OH using bromophenol blue as indicator showed the presence of BzOH and (CO<sub>2</sub>H)<sub>2</sub> resp. at R<sub>f</sub> 0.59, 0.30. II (0.5 g.) in alc. treated with 1.5 g. NaIO<sub>4</sub> and the product sepd. into acidic and neutral fractions, part of the acidic fraction sublimed to give BzOH and chromatographed showed the presence of BzOH and (CO<sub>2</sub>H)<sub>2</sub>. The neutral fraction yielded a yellow oil, hydrolyzed with aq. alkali to give p-MeOC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CO<sub>2</sub>H; amide, m. 175-7.degree.. VII (0.3 g.) in 200 ml. alc. kept 30 hrs. with 1.4 g. NaIO<sub>4</sub> in H<sub>2</sub>O and the product divided into neutral and acidic fractions yielded only unchanged VII, m. 150-1.degree..

IT **481-64-1**, Pinastric acid  
 (structure of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

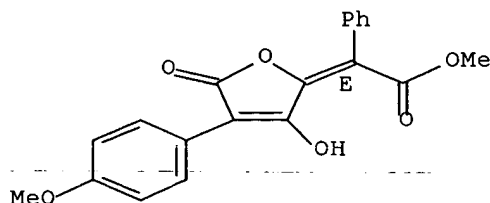
Double bond geometry as shown.





L9 ANSWER 182 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1959:40603 CAPLUS  
 DN 53:40603  
 OREF 53:7330h-i,7331a-b  
 TI Identification of lichen acids by paper chromatography  
 AU Wachtmeister, Carl Axel  
 CS Inst. org. kemi, Kungl. Tehniska Hogskolon, Stockholm  
 SO Botan. Notiser (1956), 109, 313-24  
 DT Journal  
 LA Unavailable  
 AB cf. C.A. 49, 3331i. The lichen acids were extd. with boiling C<sub>6</sub>H<sub>6</sub> followed by boiling Me<sub>2</sub>CO, hydrolyzed with 0.1M Na<sub>3</sub>PO<sub>4</sub> or with concd. H<sub>2</sub>SO<sub>4</sub>, chromatographed on normal paper or buffered with 0.1M Na<sub>2</sub>HPO<sub>4</sub>, 0.1M Na<sub>3</sub>PO<sub>4</sub>, or 0.1M NaBO<sub>2</sub>, and developed with BuOH-EtOH-H<sub>2</sub>O (4:1:5) or BuOH-H<sub>2</sub>O. Spots were detected with ultraviolet light, benzidine reagent, Gibbs reagent, p-phenylenediamine, or chloramine-T. Rf values obtained on normal paper for hydrolyzed acids of various lichens were: barbabimic, 0.75, 0.70 from Rhizocarpon geogrpahicum (I); atranorin, 0.55 from Sterocaulon sp.; baemycessic, 0.45, squamatic, 0.30 from Thamnolia vermicularis and T. taurica; thamnolic, 0.20 from T. vermicularis; protocetraric, 0-0.5, from Ramalina farinacea; salazinic, 0.20 from Parmelia saxatilis; norstictic, 0-0.4 from P. acetabulum; stictic, 0.55 from P. conspersa; psoromic, 0.40 from I; pinastrinic, 0.65 from Cetraria pinastri; and rhizocarpic, 0.75 from Biotaria lucida. Values from non-hydrolyzed acids were: fumaprotocetraric, 0.30 from-Cetraria islandica; physodalic, 0.65, from P. physodes (II); lobaric, 0.80 from Stereocaulon sp.; physodic, 0.85 from II; alectoronic, 0.75 from P. centrifuga; .alpha.-collatolic, 0.95, from Lecanora atra; strepsilin, 0.50 from Cladonia strepsilis; porphyrilic, 0.40 from Haematomma coccineum (III); usnic, 0.95 from III; pulvic, 0.70, vulpinic, 0.65 from Evernia vulpina; and calycin, from Lepraria sp.  
 IT **481-64-1**, Pinastric acid  
 (in Cetraria pinastri, chromatography of)  
 RN 481-64-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 183 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1959:34565 CAPLUS

DN 53:34565

OREF 53:6149d-i,6150a-e

TI Preparation and constitution of isopinastric acid

AU Grover, P. K.; Seshadri, T. R.

CS Delhi Univ., India

SO Tetrahedron (1958), 4, 105-10

DT Journal

LA Unavailable

AB cf. C.A. 51, 14673a. Alcoholysis of the intermediate 4-methoxypulvinic dilactone (I) in the Volhard synthesis of pinastric acid (II) yields

equal

amts. of II and the stereoisomeric isopinastric acid (III). The interpretation of the stereoisomerism as cis-trans and trans-trans modifications, resp., with reference to the 1,4-diphenylbutadiene system was supported by absorption spectra detns. I (0.5 g.) kept 30 min. in

150

ml. 2% KOH in abs. MeOH, the soln. acidified with dil. HCl at 0.degree. and filtered, the dried residue boiled with MeOH, and filtered gave

orange

II, m. 202-4.degree. (C<sub>6</sub>H<sub>6</sub>). The mother liquor concd. and filtered yielded an equal amt. of pale-orange III, m. 120-1.degree.. II and III were similarly obtained in equal amts. by refluxing 0.5 g. I 30 min.

with

25 ml. MeOH and 2 ml. HCl. III (0.1 g.) refluxed 10 min. in 20 ml. 2% Ba(OH)<sub>2</sub>, the cooled soln. acidified, and the ppt. recrystd. (Et<sub>2</sub>O-petr. ether) gave trans-trans-4-methoxypulvinic acid (IV), m. 207-8.degree.. Similar hydrolysis of II gave the corresponding cis-trans-acid (V), m. 207-9.degree., mixed m.p. with IV, 189-95.degree.. AcOH (5 ml.), 2 ml. concd. H<sub>2</sub>SO<sub>4</sub>, and 4 ml. H<sub>2</sub>O contg. 0.5 g. 4-MeOC<sub>6</sub>H<sub>4</sub>CH(CN)COCOCH(CN)Ph

(VI)

(cf. Asano and Kameda, C.A. 29, 1398) refluxed 2 hrs., the cooled soln. dild. with H<sub>2</sub>O, and filtered gave 0.2 g. crude carboxylic acid, m. 172-84.degree., crystd. (CHCl<sub>3</sub>-petr. ether) to give IV. The crude acid refluxed 3 hrs. with 1 g. K<sub>2</sub>CO<sub>3</sub> and 0.03 ml. Me<sub>2</sub>SO<sub>4</sub> in 20 ml. Me<sub>2</sub>CO, the filtered soln. evapd. and the residue taken up in H<sub>2</sub>O, filtered and the solid extd. with 5% NaHCO<sub>3</sub>, filtered, and the dried solid recrystd. (EtOAc-petr. ether) gave 50 mg. III Me ether, m. 129-31.degree.. The NaHCO<sub>3</sub> ext. acidified and filtered, the solid extd. with boiling MeOH,

and

the residue crystd. (C<sub>6</sub>H<sub>6</sub>-petr. ether) yielded 15 mg. II. The filtrate concd. gave 70 mg. III. The formation of III and II was in the ratio of 8:1 and the yield of IV and V should also have been in the same ratio. The trans-trans structure of VI is probably the most stable and isomeric change takes place only to a small extent during acid hydrolysis. IV refluxed 30 min. with Ac<sub>2</sub>O and the Ac<sub>2</sub>O evapd. in vacuo gave authentic

I,

m. 194-6.degree. (C<sub>6</sub>H<sub>6</sub>). III (0.1 g.), 2 g. K<sub>2</sub>CO<sub>3</sub>, and excess MeI refluxed 3 hrs. in 20 ml. Me<sub>2</sub>CO and the dried solid product recrystd. (EtOAc-petr. ether) gave III Me ether (VII), m. 129-31.degree. (II Me ether, m. 150-1.degree.), also prepd. similarly from IV. I (0.2 g.), 4

g.

K<sub>2</sub>CO<sub>3</sub>, and 2 moles Me<sub>2</sub>SO<sub>4</sub> refluxed 3 hrs. in 40 ml. Me<sub>2</sub>CO similarly gave VII but the use of 1 mole Me<sub>2</sub>SO<sub>4</sub> gave a mixt. of III, VII, and some unchanged I. The mixt. was treated with 5% aq. NaHCO<sub>3</sub> to remove III and VII sepd. from I by fractional crystn. (EtOAc-petr. ether). III (0.1

g.),

5 ml. Ac<sub>2</sub>O, and 2 drops C<sub>5</sub>H<sub>5</sub>N refluxed 30 min. and the product crystd. (EtOAc) yielded III acetate, m. 159-61.degree. (II acetate, m. 170-1.degree.). III (0.5 g.), 1 ml. HI, and 10 ml. AcOH refluxed 1 hr.

at

140.degree., the cooled mixt. poured over ice and extd. repeatedly with Et<sub>2</sub>O, the H<sub>2</sub>O-washed ext. extd. with 5% NaHCO<sub>3</sub>, the acidified ext. filtered and the dried red solid refluxed 30 min. with 5 ml. Ac<sub>2</sub>O,

excess

Ac<sub>2</sub>O evapd. in vacuo, and the residue recrystd. (EtOAc) gave 4-acetoxypulvinic dilactone, m. 212-13.degree., similarly obtained from II. III (1 g.), 0.44 g. .omicron.-(H<sub>2</sub>N)<sub>2</sub>C<sub>6</sub>H<sub>4</sub>, and 36 ml. PhNMe<sub>2</sub> heated (oil bath) 4 hrs. at 200.degree., the cooled mixt. poured onto ice and HCl, filtered and the dried solid recrystd. (EtOAc-petr. ether), the imidazole condensation product (0.3 g., m. 296-8.degree.) refluxed 5 hrs. in 15 ml. 15% alc. KOH, the filtered soln. evapd. in vacuo and the residue taken up in H<sub>2</sub>O, filtered, and the dried solid recrystd. (EtOAc-petr. ether) gave authentic (4-methoxybenzyl)benzimidazole, m. 165-7.degree., similarly produced from II. It was concluded that the nuclear MeO group is attached to the benzene ring near the ester group in both II and III and that the isomerism is stereoisomeric. II and PhCH:CHCH:CHPh have .lambda. 295 m.mu. in contrast to the 15 m.mu. higher values of both trans-trans-I and III, .lambda. 270, 310 m.mu.. The cis-trans form is somewhat more stable and this is attributed to polar repulsion between the CO<sub>2</sub>Me and HO group which provides the driving force for the inversion.

III (0.1 g.) heated 3 hrs. at 160.degree. (oil bath), the cooled solid extd. with boiling MeOH, and the residue recrystd. (EtOAc-petr. ether) gave II but no trace of I. The mother liquors worked up gave unchanged III. III (0.1 g.) in 50 ml. 2% KOH in MeOH kept 30 min. at 0.degree. and the ice-cold soln. acidified with HCl, filtered, and the solid product extd. with boiling MeOH yielded 11% II, m. 202-4.degree. (C<sub>6</sub>H<sub>6</sub>). The MeOH ext. contained unchanged III. III (0.1 g.) and 11 ml. PhNMe<sub>2</sub> heated (oil bath) 3 hrs. at 180.degree., the cooled mixt. poured over ice and HCl, the pale-orange product washed with cold dil. HCl and cold H<sub>2</sub>O, taken up completely in 5% NaHCO<sub>3</sub> without a trace of insol. I, the soln.

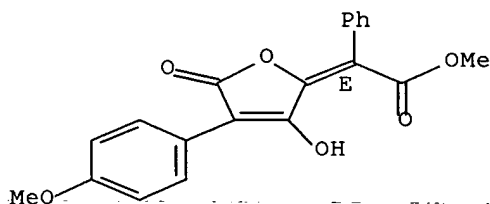
acidified, and the recovered product extd. with hot MeOH yielded 8% insol. II and unchanged III.

IT 481-64-1, Pinastric acid (and related compds.)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 184 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1959:34564 CAPLUS

DN 53:34564

OREF 53:6148d-i,6149a-d

TI Free-radical aromatic substitution by triphenylmethyl

AU Benkeser, Robert A.; Schroeder, William

CS Purdue Univ., Lafayette, IN

SO J. Am. Chem. Soc. (1958), 80, 3314-22

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA Unavailable

AB The resonance-stabilized triphenylmethyl radical (I) should be highly selective in its attack on aromatic systems in the presence of benzoyl peroxide (Wieland reaction) and yield information regarding the electrical

factors which govern free radical reactions. Isomer distribution and relative reactivities were detd. for the following substrates in order

of reactivity: PhOMe > PhCl > C6H6 > PhCO2Me > PhCF3 > PhNO2. This order is

explained in terms of the difficulty of formation of a complex between electron-deficient-aromatic rings and the highly selective, electrophilic

I. The inverse isotope diln. method utilizing C14 tracers was used to analyze the reaction mixt. quantitatively for the isomeric Ph3CC6H4R

(II)

formed. II (R = p-CO2Me) was prepd. by oxidation of p-trityltoluene, esterification with CH2N2, and recrystn. from benzene-MeOH, m.

201-2.degree.. Similarly, II (m-CO2Me) m. 135.degree.. Most compds.

were

prepd. by the Baeyer-Villiger reaction and subsequent treatment with

NaNO2

and H3PO2. 2-Methyl-4'-(acetylamino)tetraphenylmethane (III) was

obtained

in 42% yield by refluxing 50 g. .omicron.-tolyldiphenylcarbinol and 30

g.

PhNH2.HCl in 300 ml. HOAc 30 hrs., pouring into a large vol. of water, repptg. the gummy mass from pyridine, boiling in petr. ether, and recrystg. from MeOH, m. 206-7.degree.. Hydrolysis of III in EtOH and

48%

HBr gave 2-methyl-4'-aminotetraphenylmethane. (m-

Trifluoromethylphenyl)diphenylcarbinol was prepd. by a Grignard

reaction,

b0.5 140-2.degree., m. 52-4.degree.. II (m-CF3) was prepd. without

isolating the amine, m. 148-50.degree.. Similarly prepd. were: II

(.omicron.-CF3), m. 163-5.degree.; II (p-CF3), m. 197-8.degree.; II

(.omicron.-OMe), m. 147-8.5.degree.; II (m-OMe), m. 170-1.degree.; II

(p-OMe), m. 194.degree.. II (p-Cl) was prepd. by diazotization of

p-tritylaniline and addn. of CuCl, sublimation at 180.degree./0.5 mm.,

and

recrystn. from dimethylformamide-MeOH in 38% yield, m. 228-9.degree..

Similarly were prepd.: II (.omicron.-Cl), m. 193-4.degree.; II (m-Cl),

m.

193-4.degree.. II (.omicron.-CH2Br) was obtained by refluxing 10 g.

.omicron.-trityltoluene, 5.4 g. N-bromosuccinimide, 250 ml. CCl4, and

100

mg. benzoyl peroxide 6 hrs., cooling, removing the succinimide, evapg.

the

filtrate, and recrystg. the residue from petr. ether (90-100.degree.)

and

cyclohexane, m. 103-5.degree. (softens at 95.degree.). Reduction of II (.omicron.-CH<sub>2</sub>Br) with Zn-HOAc gave II (.omicron.-Me), m. 191-2.degree.. Hydrolysis of the bromide with KOH-Ag<sub>2</sub>O in (MeOCH<sub>2</sub>)<sub>2</sub> gave II (.omicron.-CH<sub>2</sub>OH), m. 90-2.degree.. CrO<sub>3</sub> oxidation of the alc. gave 9,9-diphenylanthrone, m. 189.5-90.5.degree.. To a heated mixt. of 6 g.

II

(.omicron.-CH<sub>2</sub>OH) and 150 ml. pyridine was added 10 g. powd. KMnO<sub>4</sub> over

2

hrs. with good stirring, the soln. heated another 2 hrs., cooled, the

MnO<sub>2</sub>

filtered off, the filtrate poured into H<sub>2</sub>O, the ppt. dissolved in Et<sub>2</sub>O, the acid extd. with dil. NaOH (some insol. Na salt included), the aq. suspension acidified with HCl, the crude acid (32%) sublimed at 210.degree./0.5 mm., and recrystd. from aq. EtOH yielding II (.omicron.-CO<sub>2</sub>H), m. 227-8.5.degree.. Esterification with CH<sub>2</sub>N<sub>2</sub> gave II (.omicron.-CO<sub>2</sub>Me), m. 137.5-9.degree. (MeOH). p-Bis(triphenylmethyl)benzene (IV) was prepd. in good yield by the

following

reaction series. To 4.2 g. finely cut Li in 300 ml. petr. ether (35-7.degree.) was added 27.6 g. BuCl with stirring at reflux under N, refluxing continued until the large pieces of Li had disappeared, 35.4

g.

p-C<sub>6</sub>H<sub>4</sub>Br<sub>2</sub> in 150 ml. C<sub>6</sub>H<sub>6</sub> added, the mixt. refluxed 14 hrs., 50 g. benzophenone in 150 ml. C<sub>6</sub>H<sub>6</sub> added dropwise whereby the mixt. refluxed gently, boiled 4 hrs., water added, and the material insol. in both

phases

recrystd. from aq. acetone yielding 25% p-

bis(diphenylhydroxymethyl)benzen

e (V), m. 175.degree.. V (5 g.) and 10 g. PhNH<sub>2</sub>.HCl in 50 ml. HOAc was refluxed 8 hrs., the ppt. washed with HOAc, Et<sub>2</sub>O, and H<sub>2</sub>O, the slightly purple material (85% yield) repptd. from a large vol. of aq. alc. HCl by NaOH, and recrystd. from aq. pyridine yielding p-bis[(4-aminophenyl)diphenylmethyl]benzene (VI), m. 340.degree.. A fine suspension of 3 g. VI in 400 ml. HOAc and 30 ml. 50% H<sub>3</sub>PO<sub>2</sub> was treated with excess solid NaNO<sub>2</sub> at 15-20.degree., left 4 hrs. at 20-25.degree., the slurry warmed at 40.degree. a few min., 100 ml. H<sub>2</sub>O added, and the ppt. washed with H<sub>2</sub>O, MeOH, and Et<sub>2</sub>O yielding 98% yellow-tan powder, m. 280-300.degree., recrystd. from toluene, sublimed at 290-300.degree./0.5 mm., and recrystd. from dioxane yielding IV, m. 330.degree.. A

procedure

for prepg. triphenylcarbinol-C14 in 70% yield, m. 161-2.degree., is given.

PhNO<sub>2</sub> was essentially unreactive in the Wieland reaction and gave no II

(R

= NO<sub>2</sub>). A report by Hammond and Ravve (C.A. 46, 479f) stating that

PhNO<sub>2</sub>

is reduced by I to azobenzene and Ph<sub>3</sub>COH is shown to be in error; traces of phenol formed are shown to be independent of the presence of PhNO<sub>2</sub>. The isomer distribution was detd. by the isotope diln. method. The arithmetical av. found (43% ortho, 36% meta, 21% para) is amazingly

close

to the statistical values of 40-40-20.

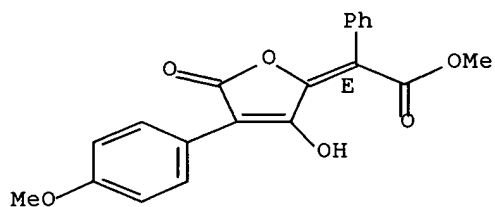
IT

**481-64-1**, Pinastric acid  
(and related compds.)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 185 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1957:81366 CAPLUS

DN 51:81366

OREF 51:14673a-b

TI Synthesis of leprapinic acid and constitution of pinastric acid

AU Mittal, O. P.; Seshadri, T. R.

CS Univ. Delhi

SO J. Chem. Soc. (1956) 1734-5

DT Journal

LA Unavailable

AB The suggested identity of leprapinic acid (I) with 2-methoxyvulpinic acid

(II) (C.A. 51, 7349b) was further confirmed by synthesis.

.alpha.-o-Methoxyphenyl-.alpha.'-phenylketipinic dinitrile was refluxed with H<sub>2</sub>SO<sub>4</sub>HOAc and then with Ac<sub>2</sub>O. 2-Methoxypulvinic dilactone, m. 172-3.degree., was obtained which when treated with methanolic KOH gave II, m. 159-60.degree., identical with I. By analogy the nuclear methoxy group of pinastric acid (III) should be in the phenyl ring near the

ester

group. This was confirmed by condensation of III with o-phenylenediamine

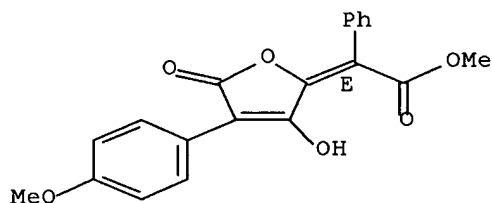
followed by hydrolysis. The product was 2-(4-methoxybenzyl)benzimidazole, which has the nuclear methoxy of III.

IT **481-64-1**, Pinastric acid  
(constitution of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



TI Chemical investigation of Indian lichens. XIX. Lepraria: constitution of leprapinic acid

AU Mittal, O. P.; Seshadri, T. R.

CS Univ. Delhi

SO J. Chem. Soc. (1955) 3053-5

DT Journal

LA Unavailable

AB cf. C.A. 49, 12371g. Two Indian lichens of the genus Lepraria were examd., *L. flava* yielding pinastric acid (I), and *L. citrina* a new lichen

acid, leprapinic acid. A mixt. of the lichen and bark was extd. 4 times with cold ligroine (b. 40-60.degree.), 24 hrs. each time. The combined exts. were filtered off and washed with small amt. of ligroine to remove adhering wax. From *L. flava* was obtained I, prisms, m. 204-5.degree. (from ligroine); acetate, prepd. with boiling Ac<sub>2</sub>O, pale yellow needles, m. 172-3.degree. (from AcOEt). Leprapinic acid (II) was obtained from

*L. citrina* as golden tablets, m. 159-60.degree. (from ligroine), sol. in aq.

NaHCO<sub>3</sub> from which it was repptd. by acid, and in alc. or ether, but sparingly so in ligroine; it gave no color with FeCl<sub>3</sub> or bleaching powder,

and a deep yellow color with H<sub>2</sub>SO<sub>4</sub>. II (0.25 g.), Ba(OH)<sub>2</sub> (0.5 g.), and 15 cc. H<sub>2</sub>O refluxed 15 min., cooled, and acidified yielded

2-methoxypulvinic acid (III), golden plates and prisms, m. 213-14.degree.

(from C<sub>6</sub>H<sub>6</sub>). II (100 mg.) was refluxed with 2.5 cc. Ac<sub>2</sub>O 30 min. and the

clear yellow soln. cooled in ice; the yellow crystals filtered off, washed

with ether, and crystd. from benzene, yielded lemon-yellow prisms of 2-methoxypulvinic dilactone (IIIa), m. 172-3.degree.. II (150 mg.), 15 cc. H<sub>2</sub>O, 300 mg. KMnO<sub>4</sub>, and 150 mg. anhyd. Na<sub>2</sub>CO<sub>3</sub> refluxed 2 hrs.,

cooled and acidified (H<sub>2</sub>SO<sub>4</sub>), SO<sub>2</sub> passed in till the mixt. was colorless, the mixt. extd. with ether, and the ext. evapd. gave a colorless residue

(A), m. 68-96.degree., no color with FeCl<sub>3</sub>. A (75 mg.), 1 cc. Ac<sub>2</sub>O, and 1 cc.

of HI (d. 1.7) were refluxed 1.5 hrs., poured into an ice-cold satd. soln.

SO<sub>2</sub>, and extd. with ether. Evapn. of the ether gave a colorless solid (B), giving a violet color with alc. FeCl<sub>3</sub> and with MeOH-H<sub>2</sub>SO<sub>4</sub> the smell of Me salicylate. B (50 mg.) was refluxed 4 hrs. with 10 cc. anhyd. Me<sub>2</sub>CO, excess Me<sub>2</sub>SO<sub>4</sub>, and 250 mg. NaHCO<sub>3</sub>. The acetone soln. was

filtered,

evapd. treated with cold H<sub>2</sub>O, and left overnight in the refrigerator.

The

esters were extd. with ether, and the ext. was washed with two 25-cc. portions aq. 5% NaOH [ether soln. (C); aq. soln. (D)]. From C was obtained BzOH; from D, o-HOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H. II (100 mg.) was oxidized 4 hrs.

by

Spiegel's method [Ber. 14, 1689(1881)] with 50 cc. 2N KMnO<sub>4</sub> in 25 cc.



aq.

5% NaOH in the cold, the soln. acidified, and SO<sub>2</sub> passed in. Extn. with ether and evapn. of the ext. gave an oil, which, paper-chromatographed

in

acetone at 35.degree. with p-bromophenol blue as indicator gave 2 rings, one sharp, R<sub>f</sub> 0.30 (oxalic acid), the other diffuse, R<sub>f</sub> 0.57-0.62, probably BzCO<sub>2</sub>H and its p-MeO deriv. II (0.2 g.), 0.15 g. o-C<sub>6</sub>H<sub>4</sub>(NH<sub>2</sub>)<sub>2</sub>, and 10 cc. PhNMe<sub>2</sub> refluxed 4 hrs. at 200-10.degree. yielded a product (IV), C<sub>25</sub>H<sub>18</sub>O<sub>4</sub>N<sub>2</sub>, orange-red prisms, m. 271-2.degree. (from EtOAc), sol. in dil. aq. KOH, giving a yellow soln. from which it was repptd. by

acid.

IV refluxed with 5 cc. alc. 10% KOH 5 hrs. gave 2-(o-methoxybenzyl)benzimidazole, m. and mixed m.p. 186-7.degree..

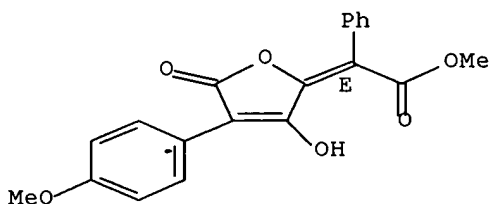
IT **481-64-1**, Pinastric acid

(prepn. of)

RN 481-64-1 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester, (.alpha.E)- (9CI) (CA INDEX NAME)

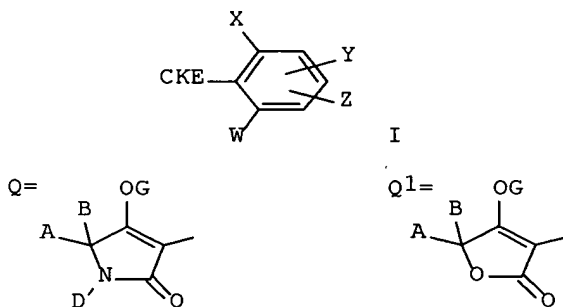
Double bond geometry as shown.



MARPAT

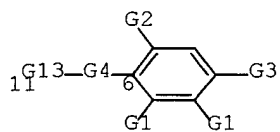
L12 ANSWER 1 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 138:165206 MARPAT  
 TI Selective herbicides based on substituted cyclic ketoenols and safeners  
 IN Fischer, Reiner; Drewes, Mark Wilhelm; Feucht, Dieter; Dahmen, Peter;  
 Pontzen, Rolf  
 PA Bayer Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 137 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003013249	A1	20030220	WO 2002-EP8413	20020729
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 10139465	A1	20030220	DE 2001-10139465	20010810
PBAI	DE 2001-10139465		20010810		
GI					

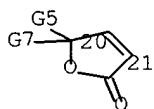


AB The invention relates to selective herbicidal compns. contg. a cyclic ketoenol I [X = halo, alkyl, alkenyl, alkoxy, etc.; Z = H, (un)substituted alkenyl, alkynyl, aryl or heteroaryl; W, Y = H, halo, (halo)alkyl, (halo)alkoxy, (halo)alkenyloxy, NO<sub>2</sub> or CN; CKE = Q, Q<sub>1</sub>, etc.; A = H, (halo)alkyl, (halo)alkenyl, etc.; B = H, alkyl or alkoxyalkyl; D = H, (un)substituted alkyl, alkenyl, alkynyl, etc.; ACB, ACD = (un)substituted cycle; G = H, COR<sub>1</sub>, etc.; R<sub>1</sub> = H, (un)substituted alkyl, alkenyl alkoxyalkyl, etc.] and a herbicide antidote, esp. cloquintocet-mexyl and mefenpyr-diethyl.

**MSTR 1**



G4 = 20-11 21-6



G13 = OH

MPL: claim 1

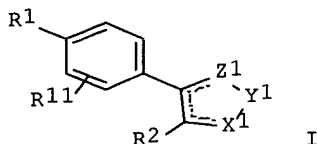
NTE: substitution is restricted

NTE: additional substitution and ring formation also claimed

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 138:14003 MARPAT  
 TI Preparation of arylfuranones and related compounds as cyclooxygenase-2 inhibitors  
 IN Garvey, David S.; Schroeder, Joseph D.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 42 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002183366	A1	20021205	US 2002-102865	20020322
PRAI	US 2001-277950P	20010323			
GI					



AB Title compds. [I; X1Y1Z1 = CR4R5CR5R51CR4R5, COCR4R41CR5R51; CR4R41CR5R51CO, [CR5(R51)]kOC(O), C(O)O[CR5R51]k, CR4R41NR3CR5R51, CR5R51NR3CO, CR4:CR41S, SCR4CR41, SN:CR4, CR4:NS, N:CR4O, OCR4:N, NR3CR4:N, N:CR4S, SCR4:N, CONR3CR51R51, R3NCR5:CR51, CR4:CR5NR3, ON:CR4, CR4:NO; NNS, SN:N; R3NCR4:N, N:CR4NR3, R3NN:N, N:NNR3, CR4R41OCR5R51, CR4R41SCR5R51, CR4R41COCR5R51, CR4R41CR5R51CS, [CR5R51]kOC(S), C(S)O[CR5R51]k, etc.; R1 = SO2C(XRjRk), S(O)C(XRjRk); R11 = H, halo, Me, CH2OH; R2 = alkyl, cycloalkyl, substituted Ph, naphthyl, heteroaryl, etc.; R3 = H, haloalkyl, cyano, alkyl, etc.; R4, R41, R5, R51 = H, amino, cyano, alkyl, haloalkyl, alkoxy, alkylthio, etc.; j = 0-3; k = 1, 2], were prepd.

Thus, 4-(4-methylthiophenyl)-3-phenyl-1,5-dihydrofuran-2-one, antimony chloride, and Deoxy-Fluor were stirred in CH2Cl2 for 12 h. MCPBA was added followed by 4 h stirring to give 8% 4-[4-[fluoromethylsulfonyl]phenyl]-3-phenyl-1,5-dihydrofuran-2-one. The latter inhibited COX-2 by 40% at 10 .mu.M.

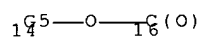
MSTR 1

G11-G16-G1-G18

G1 = 5-2 4-157



G2 = 14-4 16-5



G5 = (1-2) CH<sub>2</sub>

G16 = p-C<sub>6</sub>H<sub>4</sub> (SO (1) G17)

G18 = OH (SO)

MPL: claim 1

NTE: substitution is restricted

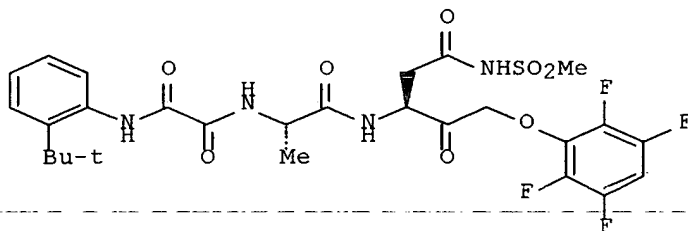
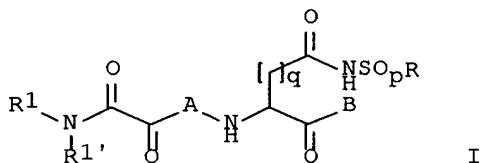
NTE: or pharmaceutically acceptable salts

NTE: additional ring formation also claimed

NTE: compound must contain at least one nitrite, nitrate, thionitrite, or thionitrate group

L12 ANSWER 3 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 137:247931 MARPAT  
 TI Preparation of novel oxamyl dipeptide inhibitors of the ICE/ced-3 family  
 of cysteine proteases  
 IN Ternansky, Robert J.; Gladstone, Patricia L.; Tomaselli, Kevin J.; Chao,  
 Bin; Linton, Steven D.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 31 pp., Cont.-in-part of U.S. Ser. No. 482,813.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002137686	A1	20020926	US 2001-908969	20010718
	US 6515173	B1	20030204	US 2000-482813	20000113
	WO 2003008374	A1	20030130	WO 2002-US23025	20020718
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2000-482813		20000113		
	US 2001-908969		20010718		
GI					



AB Title compds. I [p, q = 1 or 2; R, R1 = alkyl, cycloalkyl, Ph, etc. or  
 R1R1'N = (un)substituted heterocyclyl; A = (un)natural amino acid; B =  
 H,

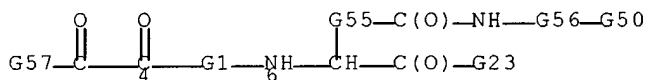
alkyl, cycloalkyl, etc.], novel oxamyl dipeptide ICE/ced-3 family inhibitors, useful in the treatment of patients suffering inflammatory, autoimmune and neurodegenerative diseases, for the prevention of ischemic

injury, and for the preservation of organs that are to undergo a transplantation procedure, were prepd. E.g., a multi-step synthesis of

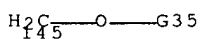
II

which showed  $K_i$  of 0.004, 0.856, 0.681, and 0.011  $\mu\text{M}$  in the mICE, CPP32, MCH2, and MCH5 assays, resp., was given.

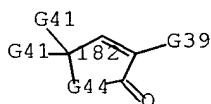
# MSTR 1



G23 = 145



G35 = 182



G39 = Ph (SO)

G44 = O

MPL: claim 1

NTE: or pharmaceutically acceptable salts

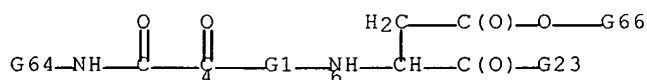
NTE: substitution is restricted

L12 ANSWER 4 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 137:215798 MARPAT  
 TI Anti-apoptotic agents or interleukin 1.beta. converting enzyme (ICE/CED-3)  
 inhibitors for preserving antigenicity of markers associated with diseases  
 IN Aja, Teresa; Ching, Brett W.; Gladstone, Patricia L.  
 PA Idun Pharmaceuticals, Inc., USA  
 SO PCT Int. Appl., 148 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

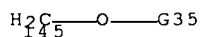
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002070544	A2	20020912	WO 2002-US7208	20020301
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003039661	A1	20030227	US 2002-87607	20020301
PRAI	US 2001-272750P		20010302		

AB The present invention relates generally to programmed cell death and specifically to methods, compns., and kits for preserving or enhancing antigenicity of markers assocd. with disease by utilizing inhibitors of apoptosis including interleukin-1.beta.-converting enzyme (ICE)/CED-3 family inhibitors.

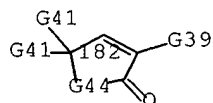
# MSTR 1



G23 = 145



G35 = 182



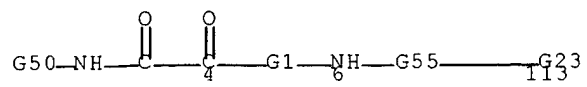
G39 = Ph (SO)  
 G44 = O  
 MPL: claim 17  
 NTE: or pharmaceutically acceptable salts



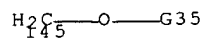
L12 ANSWER 5 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 136:310189 MARPAT  
 TI Preparation of C-terminal modified oxamyl dipeptides as inhibitors of  
 the ICE/ced-3 family of cysteine proteases  
 IN Karanewsky, Donald S.; Ternansky, Robert J.; Linton, Steven D.; Dinh,  
 Thang  
 PA USA  
 SO U.S. Pat. Appl. Publ., 59 pp., Cont.-in-part of U.S. Ser. No. 745,204.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002042376	A1	20020411	US 2001-765105	20010116
	US 6197750	B1	20010306	US 1998-177549	19981022
	US 2002028774	A1	20020307	US 2000-745204	20001219
	US 6544951	B2	20030408		
	WO 2002057298	A2	20020725	WO 2002-US1538	20020116
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,				
	PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,				
	UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,				
	TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,				
	CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,				
	BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 1998-91689P		19980702		
	US 1998-177549		19981022		
	US 2000-745204		20001219		
	WO 1999-US15074		19990701		
	US 2001-765105		20010116		
AB	Oxamyl dipeptides R1R1'NCOCO-A-NHCH(CO-B)CH2CO2R2 [A is a natural or unnatural amino acid; B = H, D, alkyl, cycloalkyl, (un)substituted Ph or naphthyl, 2-benzoxazolyl, substituted 2-oxazolyl, (CH2)ncycloalkyl, (CH2)nphenyl, (CH2)n(1- or 2-naphthyl), (CH2)nheteroaryl (n = 1-4), etc.;				
	R1 = alkyl, cycloalkyl, cycloalkylalkyl, (un)substituted Ph, phenylalkyl, or naphthyl, etc. or R1R1'N form a heterocycle; R2 = H, alkyl, cycloalkyl, cycloalkylalkyl, (un)substituted Ph, phenylalkyl, naphthyl, or naphthylalkyl] were prepd. as inhibitors of the ICE/ced-3 family of cysteine proteases (ICE = interleukin-1.beta. converting enzyme). Thus, (3S)-3-[[N-(1-naphthyloxamyl)leuciny]amino]-4-oxobutanoic acid was prepd. via coupling of 1-naphthyloxamic acid with (3S)-3-(leucinylamino)-4- oxobutanoic acid tert-Bu ester semicarbazone.				

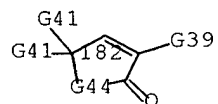
MSTR 1



G23 = 145



G35 = 182



G39 = Ph (SO)

G44 = O

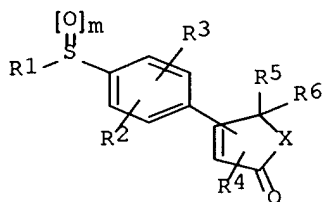
DER: or pharmaceutically acceptable salts

MPL: claim 1

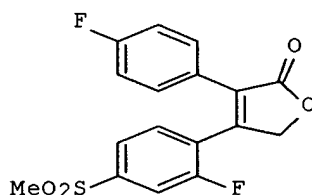
NTE: also incorporates claim 12

L12 ANSWER 6 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 136:5893 MARPAT  
 TI Preparation of 3,4-diphenyl-2,5-dihydro-2-furanones as novel compounds having antiinflammatory activity  
 IN Pal, Manojit; Yeleswarapu, Koteswar Rao; Ramanujam, Rajagopalan; Misra, Parimal; Mamnoor, Prem Kumar; Casturi, Seshagiri Rao  
 PA Reddy's Research Foundation, India  
 SO PCT Int. Appl., 114 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001090097	A2	20011129	WO 2001-IB883	20010521
	WO 2001090097	A3	20020404		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 2001058677	A5	20011203	AU 2001-58677	20010521
	US 2002032230	A1	20020314	US 2001-861903	20010521
PRAI	IN 2000-MA388		20000522		
	IN 2000-MA436		20000608		
	WO 2001-IB883		20010521		
GI					



I



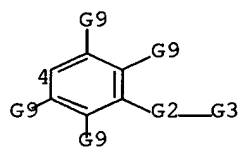
II

AB The title compds. [I; R1 = NH2, alkyl, aryl, etc.; R2 = halo, OH, CN, etc.; R3 = H, halo, OH, etc.; R4, R5 = H, halo, aryl, etc.; R6 = H, halo, OH, etc.; m = 0-2], useful as cyclooxygenase-2 inhibitors, were prepd. E.g., a multi-step synthesis of the furanone II which showed 100% inhibition of COX-2 vs. 33% inhibition of COX-1 at 100 .mu.M in vitro, was given.

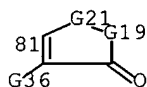
MSTR 1

G1—G18

G1 = 4



G18 = 81



G19 = O  
G21 = 105

~~105~~—G31

G31 = O

G36 = OH

MPL: claim 1

NTE: additional substitution also claimed

NTE: and derivatives, analogs, tautomers, polymorphs, and  
pharmaceutically

acceptable salts and solvates

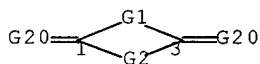
NTE: also incorporates claims 8 and 9

STE: and stereoisomers and regioisomers

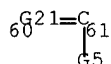
L12 ANSWER 7 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 135:352825 MARPAT  
 TI Heterocyclic inhibitors of glycogen synthase kinase GSK-3  
 IN Martinez Gil, Ana; Castro Morera, Ana; Perez Martin, Maria Conception;  
 Cascon, Mercedes Alonso; Diaz Dorronsero, Isabel; Moreno Munoz,  
 Francisco  
 Jose; Wandosell Jurado, Francisco  
 PA Spain  
 SO PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001085685	A1	20011115	WO 2001-GB2100	20010511
	W: AE, AG, AL, AU, AZ, BA, BB, BG, BY, BZ, CA, CH, CO, CR, CU, DE, DK, DZ, EE, ES, GH, GM, HU, ID, IL, IN, JP, KG, KP, KR, LT, LU, MA, MD, MG, MN, NO, NZ, PL, PT, RO, RU, UA, UG, VN, YU, ZA, AM, KG, KZ, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, FI, GB, IE, LU, MC, NL, PT, TR, BF, CG, CI, CM, GN, ML, MR, NE, SN, TD, TG				
	ES 2166328	A1	20020401	ES 2000-1185	20000511
	BR 2001010734	A	20030204	BR 2001-10734	20010511
	EP 1286964	A1	20030305	EP 2001-928117	20010511
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI	ES 2000-1185		20000511		
	GB 2000-30284		20001212		
	WO 2001-GB2100		20010511		
AB	Heterocyclic compds. that inhibit glycogen synthase kinase 3.beta. (GSK-3) at micromolar concns. as well as their pharmaceutical formulations for the treatment of diseases such as Alzheimer's disease, non-dependent insulin diabetes mellitus, and hyperproliferative diseases such as cancer, dysplasia or metaplasia of tissue, psoriasis, arteriosclerosis or restenosis are described.				

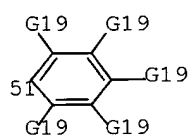
# MSTR 1



G1 = 0  
 G2 = 60-1 61-3



G5 = 51



G10 = 0  
 G20 = 0  
 G21 = 9

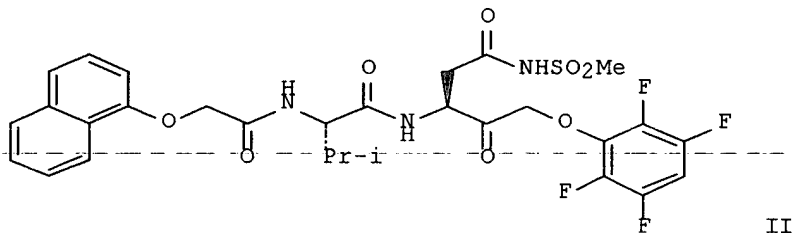
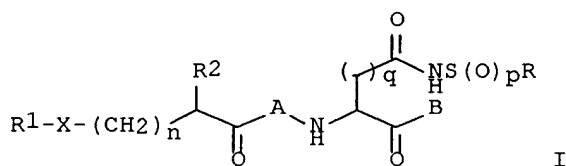
G—G5

MPL: claim 1  
 NTE: additional substitution also claimed

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 8 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 135:318717 MARPAT  
 TI Preparation of sulfonamido dipeptide inhibitors of the ICE/ced-3 family  
 of  
 cysteine proteases  
 IN Ternansky, Robert J.; Gladstone, Patricia L.; Tomaselli, Kevin J.  
 PA Idun Pharmaceuticals, Inc., USA  
 SO PCT Int. Appl., 68 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001079162	A2	20011025	WO 2001-US12563	20010417
	WO 2001079162	A3	20020228		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	EP 1276717	A2	20030122	EP 2001-927155	20010417
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
	US 6525024	B1	20030225	US 2001-837614	20010417
PRAI	US 2000-327555P	20000417			
	US 2000-550917	20000417			
	WO 2001-US12563	20010417			
GI					



AB Dipeptides I [n = 0-2; p, q = 1-2; R = alkyl, cycloalkyl,

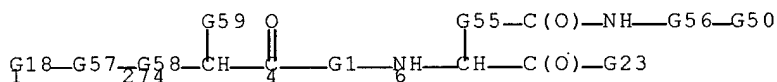
cycloalkylalkyl,

(un)substituted Ph, phenylalkyl, naphthyl, naphthylalkyl, heteroaryl or heteroarylalkyl, an amino group, alkoxy, aryloxy, etc.; R1 = (un)substituted Ph, naphthyl or heteroaryl; R2 = H, cycloalkyl, (un)substituted alkyl or phenyl; X = CH2, CO, O, S, NH, C(O)NH or CH2O2CNH; A = (un)natural amino acid; B = H, D, alkyl, cycloalkyl, (un)substituted Ph or naphthyl, 2-benzoxazolyl, etc.], novel dipeptide ICE/ced-3 family inhibitors, were prepd. for use in the treatment of patients suffering inflammatory, autoimmune and neurodegenerative diseases, the prevention of ischemic injury, and the preservation of organs that are to undergo a transplantation procedure. Thus, dipeptide II was prepd. by a multistep procedure starting from Fmoc-Asp(OBn)-OH (Fmoc = fluorenylmethoxycarbonyl, Bn = benzyl) and showed Ki values

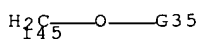
0.20,

0.08, 0.40, and 0.60 .mu.M in the Cs-1, Csp-3, Csp-6, and Csp-8 assays, resp. (vs. 0.015, 0.820, 0.594, and 0.018 .mu.M for ref. compd. BnO2C-Val-Ala-Asp-H).

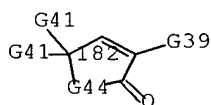
#### MSTR 1A



G23 = 145



G35 = 182



G39 = Ph (SO)

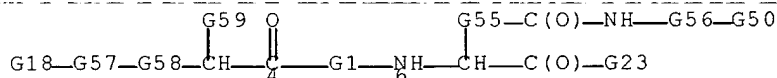
G44 = O

MPL: claim 1

NTE: or pharmaceutically acceptable salts

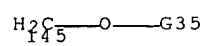
NTE: substitution is restricted

#### MSTR 1B

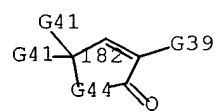


G23 = 145





G35 = 182



G39 = Ph (SO)

G44 = O

MPL: claim 1

NTE: or pharmaceutically acceptable salts

NTE: substitution is restricted

L12 ANSWER 9 OF 33 MARPAT COPYRIGHT 2003 ACS

AN 135:288683 MARPAT

TI Preparation of carboxytetrahydrofuranone derivatives as selective preventives/remedies for progressive lesions after organ damage

IN Ishibashi, Michio; Wagner, Alain; Mioskowski, Charles; Sylvain, Catherine

PA Japan

SO PCT Int. Appl., 114 pp.

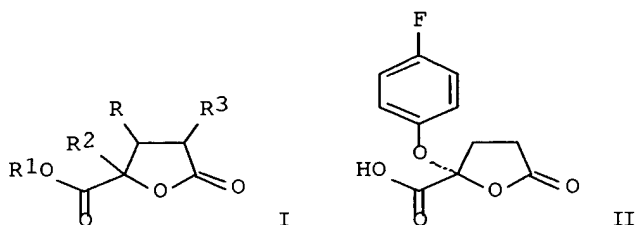
CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001072730	A1	20011004	WO 2001-JP2513	20010327
	W:	AE, AG, AL, AM, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CO, CR, CU, CZ, DM, DZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MA, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 2001042823	A5	20011008	AU 2001-42823	20010327
	EP 1277747	A1	20030122	EP 2001-915865	20010327
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRAI	JP 2000-88990		20000328		
	JP 2000-289458		20000922		
	WO 2001-JP2513		20010327		
GI					

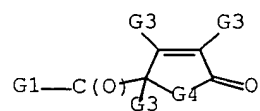


AB Title compds. [I; R = H; R3 = H; RR3 = CH:CH:CH:CH; R1 = H, OCH2C6H5, 2-(2-naphthyl)ethyl; R2 = 4-FC6H4O, HCCCH2, C6H5CH2, Cl, F, CN, OH, H], salts, and stereoisomers are prepd. as drugs for preventing and/or treating progressive lesions after organ damage without inhibiting the function of the organ or the regeneration function thereof, by selectively

regulating the induction of cytotoxic effector macrophages which are induced into damaged organ tissues in response to chemokines or cytokines

expressed depending on the type of the damaged organ tissues. Thus, the title compd. II was prepd. and biol. tested.

MSTR 3



G3 = OH (SO G7) / Ph

G4 = O

MPL: claim 24

NTE: substitution is restricted

NTE: oxygen at 12 is free radical

RE.CNT 8      THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 10 OF 33 MARPAT COPYRIGHT 2003 ACS

AN 135:284561 MARPAT

TI Insecticidal and acaricidal compositions containing keto enols

IN Fischer, Reiner; Erdelen, Christoph; Bretschneider, Thomas

PA Bayer AG, Germany

SO Ger. Offen., 16 pp.

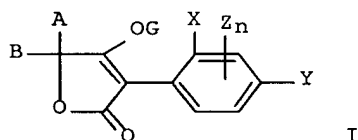
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10018370	A1	20011018	DE 2000-10018370	20000414
	WO 2001078511	A1	20011025	WO 2001-EP3713	20010402
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,				
	HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,				
	LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,				
	RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,				
	VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				
	DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,				
	BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	BR 2001010069	A	20021231	BR 2001-10069	20010402
	EP 1276376	A1	20030122	EP 2001-931557	20010402
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI	DE 2000-10018370		20000414		
	WO 2001-EP3713		20010402		
GI					



AB Insecticidal and acaricidal compns. contain keto enols I [X = halo, (halo)alkyl or alkoxy; Y = H or X; Z = halo, alkyl or alkoxy; n = 0, 1-3;

A

= H, (halo)alkyl, (halo)alkenyl, (halo)alkynyl, alkoxyalkyl, etc.; B =

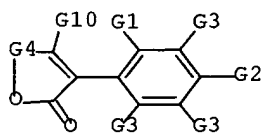
H,

alkyl or alkoxyalkyl; ACB = ring; G = H, COR<sub>1</sub>, CO<sub>2</sub>R<sub>2</sub> or SO<sub>2</sub>R<sub>3</sub>, etc.; R<sub>1</sub>

=

(halo)alkyl, (halo)alkenyl, (halo)alkoxyalkyl, (halo)pyridyl, (halo)alkylthioalkyl, etc.; R<sub>2</sub> = (halo)alkyl, (halo)alkoxy, etc.; R<sub>3</sub> = (halo)alkyl, (un)substituted Ph or benzyl, etc.] and any of 20 known insecticides and acaricides.

MSTR 1



G4 = 19



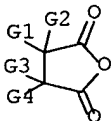
G10 = OH  
MPL: claim 1

L12 ANSWER 11 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 135:195491 MARPAT  
 TI Preparation of hydroxyphthalimides  
 IN Ishida, Hajime; Haga, Toru  
 PA Sumitomo Chemical Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 2001233854	A2	20010828	JP 2000-51017	20000228
PRAI	JP 2000-51017	20000228			
OS	CASREACT 135:195491				

AB Cyclic N-hydroxyimides are prepd. by reaction of cyclic anhydrides with hydroxylamines in carboxylic acid solvents. NH<sub>2</sub>OH.HCl was reacted with phthalic anhydride in the presence of K<sub>2</sub>CO<sub>3</sub> in AcOH at 95.degree. for 5 h to give 65% N-hydroxyphthalimide.

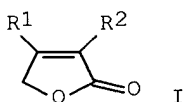
**MSTR 1**



G1 = Ph (SO alkyl)  
 G4 = alkoxy  
 MPL: claim 2

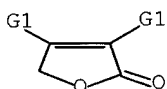
L12 ANSWER 12 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 135:152710 MARPAT  
 TI Process for the preparation of .alpha.,.beta.-unsaturated-.gamma.-  
 butyrolactones  
 IN Takahashi, Shigetoshi  
 PA Kuraray Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001213872	A2	20010807	JP 2000-19589	20000128
PRAI	JP 2000-19589	20000128			
OS	CASREACT 135:152710				
GI					



AB The title compds., e.g., -I [R1, R2 = H, alkoxy, etc.], are prepd. by  
 reacting acetylene derivs. with carbon monoxide in water in the presence  
 of a rhodium compd. The title compds. are intermediates for drugs and  
 agrochems. Thus, treatment of diphenylacetylene with carbon monoxide  
 (10 MPa) in water contg. triethylamine and hexadecacarbonylhexarhodium at  
 80.degree. for 18 h gave 3,4-diphenyl-2(5H)-furanone in 85% yield.

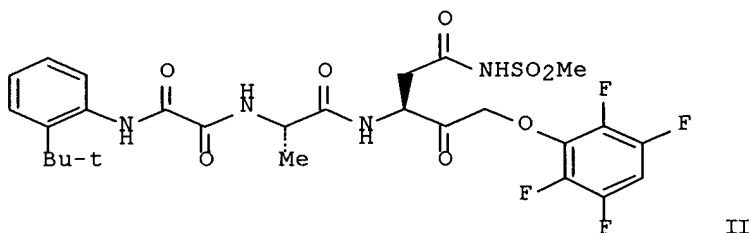
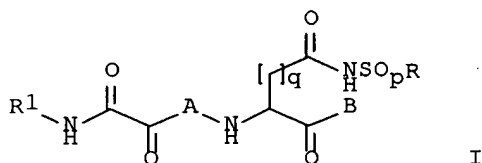
#### MSTR 2



G1 = alkoxy / Ph  
 MPL: claim 1

L12 ANSWER 13 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 135:107583 MARPAT  
 TI Preparation of novel oxamyl dipeptide inhibitors of the ICE/ced-3 family  
 of cysteine proteases  
 IN Ternansky, Robert J.; Gladstone, Patricia L.; Tomaselli, Kevin J.  
 PA Idun Pharmaceuticals, Inc., USA  
 SO PCT Int. Appl., 57 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001051462	A1	20010719	WO 2001-US1006	20010110
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	US 6515173	B1	20030204	US 2000-482813	20000113
	EP 1261583	A1	20021204	EP 2001-942358	20010110
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRAI	US 2000-482813		20000113		
	WO 2001-US1006		20010110		
GI					



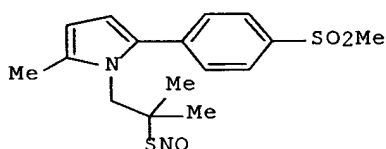
AB The title compds. [I; p = 1-2; q = 1-2; R, R1 = alkyl, cycloalkyl, Ph, etc.; A = (un)natural amino acid; B = H, alkyl, cycloalkyl, etc.], novel oxamyl dipeptide ICE/ced-3 family inhibitors, useful in the treatment of patients suffering inflammatory, autoimmune and neurodegenerative





L12 ANSWER 14 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 135:76524 MARPAT  
 TI Preparation of nitrosated and nitrosylated cyclooxygenase-2 inhibitors  
 IN Bandarage, Ramani R.; Bandarage, Upul K.; Fang, Xinqin; Garvey, David S.;  
 Letts, L. Gordon; Schroeder, Joseph D.; Tam, Sang William  
 PA Nitromed, Inc., USA  
 SO PCT Int. Appl., 230 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001045703	A1	20010628	WO 2000-US35014	20001222
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2001041726	A1	20011115	US 2000-741816	20001222
	EP 1246621	A1	20021009	EP 2000-989422	20001222
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI	US 1999-171623P		19991223		
	US 2000-226085P		20000818		
	WO 2000-US35014		20001222		
GI					



I

AB Title compds. were prepd. Thus, MeCOCH:CH<sub>2</sub> was condensed with 4-(MeS)C<sub>6</sub>H<sub>4</sub>CHO and the oxidized product cyclocondensed with Me<sub>2</sub>C(SH)CH<sub>2</sub>NH<sub>2</sub> to give, after Me<sub>3</sub>CONO treatment, title compd. I. Data for biol. activity of title compds. were given.

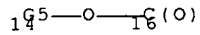
MSTR 1

G11-G16-G1-G18

G1 = 5-2 4-157



G2 = 14-4 16-5



G5 = (1-2) CH2

G16 = p-C6H4 (SO (1) G17)

G18 = OH (SO)

MPL: claim 1

NTE: substitution is restricted

NTE: or pharmaceutically acceptable salts

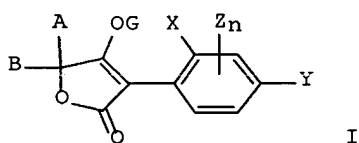
NTE: additional ring formation also claimed

NTE: compound must contain at least one nitrite, nitrate, thionitrite, or thionitrate group

RE.CNT 4      THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

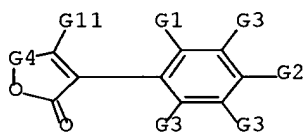
L12 ANSWER 15 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 134:262332 MARPAT  
 TI Fungicidal and acaricidal compositions  
 IN Fischer, Reiner; Wachendorff-Neumann, Ulrike  
 PA Bayer AG, Germany  
 SO Ger. Offen., 22 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19948590	A1	20010412	DE 1999-19948590	19991008
PRAI	DE 1999-19948590		19991008		
GI					



AB The title compns. comprise cyclic ketoenols I [X = halo, (halo)alkyl or alkoxy; Y = H or X; Z = halo, alkyl or alkoxy; n = 0-3; A, B = H, (halo)alkyl, (halo)alkenyl, etc.; ACB = ring; G = H, COR, etc.; R = (halo)alkyl, (halo)alkenyl, (halo)alkoxyalkyl, etc.] and any of 54 known fungicides.

#### MSTR 1



G4 = 20



G11 = OH  
 MPL: claim 1

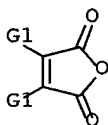
L12 ANSWER 16 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 134:237386 MARPAT  
 TI Preparation of cyclic N-hydroxyimides  
 IN Fritz-Langhals, Elke  
 PA Consortium fuer Elektrochemische Industrie G.m.b.H., Germany  
 SO Eur. Pat. Appl., 13 pp.  
 CODEN: EPXXDW

DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1085013	A1	20010321	EP 2000-118205	20000831
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	DE 19942700	C1	20010405	DE 1999-19942700	19990907
	JP 2001122859	A2	20010508	JP 2000-266953	20000904
	JP 3288682	B2	20020604		
	US 6316639	B1	20011113	US 2000-657201	20000907
PRAI	DE 1999-19942700		19990907		
OS	CASREACT 134:237386				
AB	The title process comprises reaction of a dicarboxylic acid or anhydride with a hydroxylamine salt. Thus, phthalic anhydride was heated with hydroxylammonium phosphate to give 86% N-hydroxyphthalimide.				

## MSTR 2



G1 = OH / Ph (SO (1-) G4)  
 MPL: claim 3  
 NTE: additional ring formation also claimed  
 NTE: or salts

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 17 OF 33 MARPAT COPYRIGHT 2003 ACS

AN 132:93655 MARPAT

TI Preparation of C-terminal modified oxamyl dipeptides as inhibitors of the

ICE/ced-3 family of cysteine proteases

IN Karanewsky, Donald S.; Ternansky, Robert J.

PA Idun Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 105 pp.

CODEN: PIXXD2

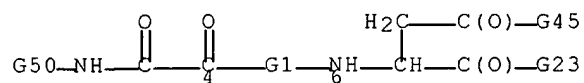
DT Patent

LA English

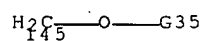
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000001666	A1	20000113	WO 1999-US15074	19990701
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	US 6197750	B1	20010306	US 1998-177549	19981022
	CA 2336474	AA	20000113	CA 1999-2336474	19990701
	AU 9948569	A1	20000124	AU 1999-48569	19990701
	AU 752339	B2	20020919		
	EP 1091930	A1	20010418	EP 1999-932211	19990701
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	BR 9911675	A	20020205	BR 1999-11675	19990701
	JP 2002519406	T2	20020702	JP 2000-558071	19990701
	US 2002028774	A1	20020307	US 2000-745204	20001219
	US 6544951	B2	20030408		
	NO 2000006544	A	20010228	NO 2000-6544	20001221
PRAI	US 1998-91689P		19980702		
	US 1998-177549		19981022		
	WO 1999-US15074		19990701		
AB	Oxamyl dipeptides R1NHCOCO-A-NHCH(CO-B)CH2CO2R2 [A is a natural or unnatural amino acid; B = H, D, cycloalkyl, (un)substituted Ph or naphthyl, 2-benzoxazolyl, substituted 2-oxazolyl, halomethyl, (CH2)ncycloalkyl, (CH2)nphenyl, (CH2)n(1- or 2-naphthyl), (CH2)nheteroaryl (n = 1-4), etc.; R1 = alkyl, cycloalkyl, cycloalkylalkyl, (un)substituted Ph, phenylalkyl, or naphthyl, etc.; R2 = H, alkyl, cycloalkyl, cycloalkylalkyl, (un)substituted Ph, phenylalkyl, naphthyl, or naphthylalkyl] were prep'd. as inhibitors of the ICE/ced-3 family of cysteine protease (ICE = interleukin-1.beta. converting enzyme). Thus, (3S)-3-[[N-(1-naphthyloxamyl)leucinyl]amino]-4-oxobutanoic acid, prep'd. via coupling of 1-naphthyloxamic acid with (3S)-3-(leucinylamino)-4-oxobutanoic acid tert-Bu ester semicarbazone, showed IC50 = 0.027 .mu.M for mICE and IC50 = 0.010 .mu.M for CPP32 enzyme assays.				

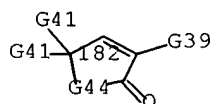
MSTR 1



G23 = 145



G35 = 182



G39 = Ph (SO)

G44 = O

DER: or pharmaceutically acceptable salts

MPL: claim 1

RE.CNT 3      THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 18 OF 33 MARPAT COPYRIGHT 2003 ACS

AN 130:296553 MARPAT

TI Preparation of analogs of strobilurine as agrochemical fungicides.

IN Filippini, Lucio; Venturini, Isabella; Colombo, Laura; Mirena, Luigi

PA Isagro Ricerca S.r.l., Italy

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

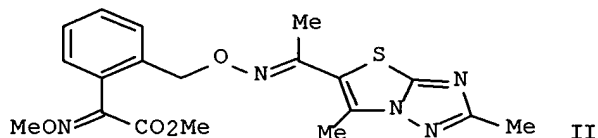
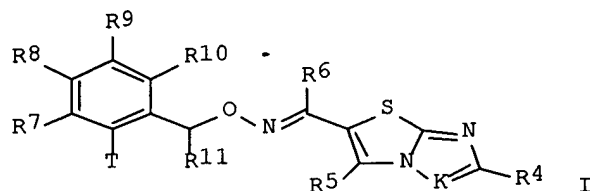
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 909760	A1	19990421	EP 1998-203490	19981016
	EP 909760	B1	20011212		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	AT 210667	E	20011215	AT 1998-203490	19981016
	ES 2169475	T3	20020701	ES 1998-203490	19981016
	JP 11193288	A2	19990721	JP 1998-297339	19981019
	US 5994380	A	19991130	US 1998-174451	19981019
PRAI	IT 1997-MI2347		19971017		

GI



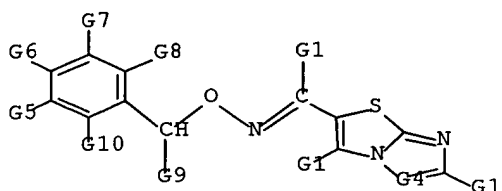
AB Title compds. [I; R4, R5, R6 = H, alkyl, haloalkyl, alkoxy, haloalkoxy, thioalkyl, amino, cycloalkyl, heterocyclyl, alkoxy carbonyl, carbamoyl, PH, naphthyl, PhO, naphthyloxy, etc.; K = N, CR12; R7-R12 = H, alkyl, alkoxy, thioalkyl, cycloalkyl, alkoxy carbonyl, Ph, cyano, halo, etc.; adjacent pairs of Rd-Rg = CH:CHCH:CH; T = R2YCH:CDOXR1, R2YN:CCOXR1, etc.; X, Y = O, S, NR3, bond; R1 = H, alkyl, haloalkyl, alkoxy, haloalkoxy, etc.; R2 = H, alkyl, haloalkyl; R3 = H, alkyl, haloalkyl; with provisos], were prepd.

Thus, 2-BrCH2C6H4C(:NOMe)CO2Me was stirred with K2CO3 in DMF; 6-acetylthiazolo[3,2-b][1,2,4]triazole oxime in DMF was added and the mixt. was kept 24 h to give title compd. (II). All I at 500 ppm gave >90%

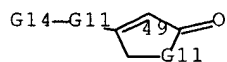


control of *Sphaerotheca fuliginea* on cucumber leaves.

**MSTR 1**



G10 = 49



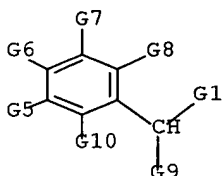
G11 = O

MPL: claim 1

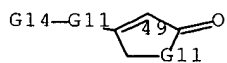
NTE: also incorporates structure 1a from claim 31

NTE: substitution is restricted

**MSTR 2**



G10 = 49



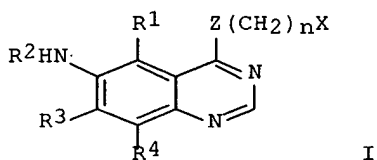
G11 = O

MPL: claim 31

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 19 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 130:196664 MARPAT  
 TI Preparation of 4-phenylaminoquinazolin-6-ylamides and related compounds  
 as tyrosine kinase inhibitors.  
 IN Wissner, Allan; Tsou, Hwei-ru; Johnson, Bernard Dean; Hamann, Philip  
 Ross;  
 Zhang, Nan  
 PA American Cyanamid Company, USA  
 SO PCT Int. Appl., 121 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

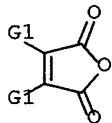
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9909016	A1	19990225	WO 1998-US15789	19980729
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	TW 436485	B	20010528	TW 1998-87112356	19980728
	AU 9886023	A1	19990308	AU 1998-86023	19980729
	EP 1000039	A1	20000517	EP 1998-937275	19980729
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV, FI, RO				
	BR 9811805	A	20000815	BR 1998-11805	19980729
	US 6251912	B1	20010626	US 1998-124365	19980729
	JP 2001515071	T2	20010918	JP 2000-509699	19980729
	ZA 9806905	A	20000131	ZA 1998-6905	19980731
	NO 2000000487	A	20000331	NO 2000-487	20000131
PRAI	US 1997-904942		19970801		
	US 1997-55072P		19970801		
	WO 1998-US15789		19980729		
GI					



AB Title compds. [I; X = (substituted) cycloalkyl, pyridinyl, pyrimidinyl, Ph; Z = NH, O, S, NR; R = alkyl; R1, R3, R4 = H, halo, alkyl, alkenyl, alkynyl, alkenyloxy, alkynyloxy, CH2OH, halomethyl, alkanoyloxy, alkenoyloxy, alkynyloxy, alkanoyloxymethyl, etc.; R2 = R5C.tplbond.CCO, (R5)2C:CR5CO, R5SS[C(R5)2]rCO, etc.; n = 0, 1; r = 1-4; R5 = H, CO2H, carboalkoxy, Ph, etc.], were prepd. Thus, 4-dimethylamino-2-butynoic acid

(prepn. given) was stirred with iso-Bu chloroformate and N-methylmorpholine in THF with ice cooling; N-(3-bromophenyl)-4,6-quinazolinediamine in pyridine was added and the mixt. was stirred 2 h at 0.degree. to give 4-dimethylamino-2-butynoic acid [4-(3-bromophenylamino)quinazolin-6-yl]amide. The latter inhibited MB435 tumor cell growth with IC50 = 0.05 .mu.g/mL.

**MSTR 4**



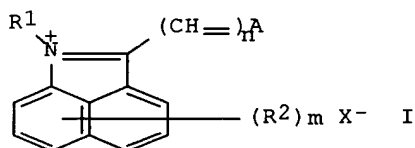
G1 = Ph / alkoxy<(1-)> (SR (1-) G2)  
MPL: claim 25

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 20 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 128:198679 MARPAT  
 TI Optical recording material for recording at short wavelength 635-680 nm  
 IN Yamamiya, Shiro; Sasaki, Seishichi; Abe, Yoshio; Kitagawa, Sumiko;  
 Shinkai, Masahiro; Nanba, Noriyoshi  
 PA Dainippon Color and Chemicals Mfg. Co., Ltd., Japan; TDK Electronics  
 Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 35 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

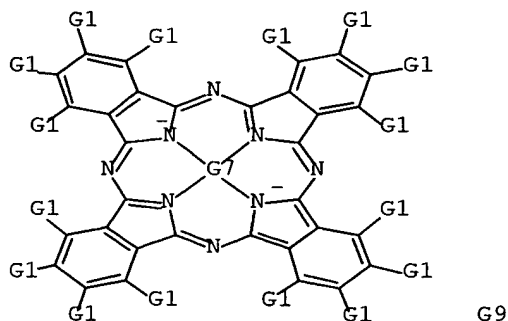
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10035097	A2	19980210	JP 1996-212070	19960723
PRAI	JP 1996-212070		19960723		

GI

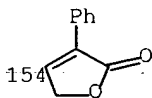


AB The title recording material has a recording layer contg. a naphtholactam dye I (R1 = alkyl, cycloalkyl, alkenyl, aryl, aralkyl; R2 = monovalent substituent; m = 0-6; n = 0, 1; when n = 0, A = monovalent substituent derived from the heterocyclic ring; when n = 1, A = divalent group; X- = anion). A 2nd dye showing different optical properties may be further contained.

#### MSTR 2A



G2 = O  
 G3 = 154



MPL: claim 9  
 NTE: substitution is restricted

L12 ANSWER 21 OF 33 MARPAT COPYRIGHT 2003 ACS

AN 127:331190 MARPAT

TI Process for the manufacture of fluorine-substituted hydrocarbons

IN Baker, Ralph Thomas; Beatty, Richard Paul; Sievert, Allen Capron; Wallace,

Robert Lewis, Jr.

PA E.I. Du Pont De Nemours and Company, USA; Baker, Ralph Thomas; Beatty, Richard Paul; Sievert, Allen Capron; Wallace, Robert Lewis, Jr.

SO PCT Int. Appl., 33 pp.

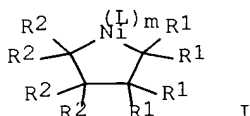
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

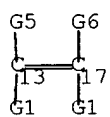
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9735820	A1	19971002	WO 1997-US4801	19970325
	W: JP, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE	EP 889867	A1	19990113	EP 1997-916972	19970325
	EP 889867	B1	20030108		
	R: DE, ES, FR, GB, IT, NL				
	JP 2000507551	T2	20000620	JP 1997-534557	19970325
	US 6242658	B1	20010605	US 1999-155262	19990806
PRAI	US 1996-14351P	19960328			
	WO 1997-US4801	19970325			
OS	.CASREACT 127:331190				
GI					



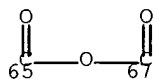
AB Processes involving nickel metallacycles with phosphite ligands are disclosed as useful for the manuf. of selected substituted hydrocarbons CHR<sub>1</sub>CR<sub>1</sub>CR<sub>2</sub>CHR<sub>2</sub> (R<sub>1</sub>, R<sub>2</sub> = H, F, Cl, CN, R, OR, CO<sub>2</sub>R, COR, O<sub>2</sub>CR, Rf, CO<sub>2</sub>Rf, CORf, O<sub>2</sub>CRf, with R = hydrocarbyl group and Rf = polyfluoroalkyl).

Thus, reaction of metallacycles I (same R<sub>1</sub>, R<sub>2</sub>; L = phosphite ligand; m = 1, 2), [prepd. by reaction of R<sub>2</sub>2C:CR<sub>2</sub>, R<sub>1</sub>2C:CR<sub>1</sub> and NiL<sub>n</sub> (n = 2-4)], with H<sub>2</sub> gave the substituted hydrocarbons. E.g., a mixt. of NiL<sub>4</sub> (L = trineopentyl phosphite), trineopentyl phosphite, PhMe, TFE, and H<sub>2</sub> was pressurized and heated to give HFC-338pcc.

MSTR 3B



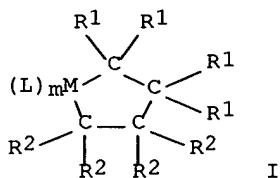
G1 = OCF3 / Ph  
 G5 +G6 = 65-13 67-17



MPL: claim 2

L12 ANSWER 22 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 125:114859 MARPAT  
 TI Process for the manufacture of selected halogenated hydrocarbons  
 containing fluorine and hydrogen and compositions provided therein by  
 catalytic hydrogenation of nickel and iron metallacycles  
 IN Baker, Ralph Thomas; Beatty, Richard Paul; Farnham, William Brown;  
 Wallace, Robert Lewis, Jr.  
 PA E.I. Du Pont De Nemours and Company, USA  
 SO PCT Int. Appl., 63 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

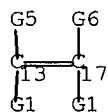
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9610002	A1	19960404	WO 1995-US12239	19950926
	W: JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5545769	A	19960813	US 1994-315025	19940929
	US 5670679	A	19970923	US 1995-458784	19950602
	US 5760282	A	19980602	US 1995-459011	19950602
	EP 783472	A1	19970716	EP 1995-933938	19950926
	R: DE, ES, FR, GB, IT, NL				
	JP 10506895	T2	19980707	JP 1995-511943	19950926
PRAI	US 1994-315025		19940929		
	WO 1995-US12239		19950926		
OS	CASREACT 125:114859				
GI					



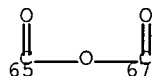
AB A process is disclosed for the manuf. of halogenated hydrocarbons,  
 HC(R1)2C(R1)2C(R2)2H wherein each R1 is independently selected from the  
 group consisting of H, F, Cl, CN, R, OR, CO2R, C(O)R, OC(O)R, Rf, ORf  
 and  
 OC(O)Rf where R is a hydrocarbonyl group and Rf is a C1 to C10  
 polyfluoroalkyl group, provided that at least one R1 is F, and wherein  
 each R2 is independently selected from the group consisting of H, F, Cl,  
 CN, R, OR, CO2R, C(O)R, OC(O)R, Rf, ORf, CO2Rf, C(O)Rf, OC(O)Rf and  
 difunctional linkages where an R2 group on each of two adjacent C atoms  
 together form a link selected from the group consisting of -CH2CH2CH2-,  
 -CH2CH2CH2CH2-, -CH2CH2CH2Me-, -CH2CH2MeCH2-, -C(O)C(O)-, and  
 norbornanediyl. The process involves reacting a metallacycle I wherein  
 R1  
 and R2 are as defined above, and wherein M is a metal selected from the  
 group consisting of Group 8, Group 9 and Group 10 metals, each L is a  
 ligand selected from the group consisting of Group 14, Group 15 and  
 Group

16 ligands, and m is an integer from 1 to 4, in the liq. phase with H. E.g., addn. of H<sub>2</sub> to I [R<sub>1</sub> = R<sub>2</sub> = F, M(L)<sub>m</sub> = Fe(CO)<sub>4</sub>] in toluene in the presence of RuHCl(PPh<sub>3</sub>)<sub>3</sub> catalyst gave H(CF<sub>2</sub>)<sub>4</sub>H in 92% yield and perfluorocyclobutene in 2% yield. Also disclosed are certain compns. comprising product compds. within the above product compd. formula and certain metallacycle compds. within the above metallacycle formula.

**MSTR 3B**



G1 = OCF<sub>3</sub> / Ph  
 G5 + G6 = 65-13 67-17



MPL: claim 2



L12 ANSWER 23 OF 33 MARPAT COPYRIGHT 2003 ACS

AN 125:58526 MARPAT

TI 2-Substituted 1,2,5,-thiadiazolidin-3-one 1,1-dioxides as inhibitors of human leukocyte elastase

IN Desai, Ranjit C.; Hlasta, Dennis J.

PA Sterling Winthrop Inc., USA

SO U.S., 15 pp.

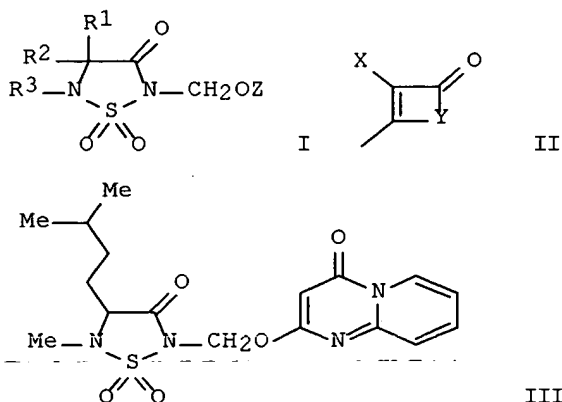
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

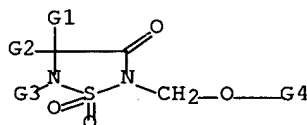
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5512576	A	19960430	US 1994-348440	19941202
	CA 2205799	AA	19960606	CA 1995-2205799	19951130
	WO 9616952	A1	19960606	WO 1995-US15564	19951130
	W: AU, CA, CN, FI, HU, JP, MX, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9642484	A1	19960619	AU 1996-42484	19951130
	AU 703625	B2	19990325		
	EP 793660	A1	19970910	EP 1995-940883	19951130
	EP 793660	B1	20021030		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
SE	CN 1173176	A	19980211	CN 1995-197436	19951130
	CN 1068318	B	20010711		
	HU 77743	A2	19980728	HU 1998-568	19951130
	JP 10510536	T2	19981013	JP 1995-519057	19951130
	AT 226947	E	20021115	AT 1995-940883	19951130
	NO 9702391	A	19970526	NO 1997-2391	19970526
	FI 9702308	A	19970530	FI 1997-2308	19970530
PRAI	US 1994-348440		19941202		
	WO 1995-US15564		19951130		
GI					



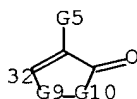
AB This invention relates to title compds. I wherein R1 is hydrogen, lower-alkyl, or phenyl-lower-alkyl; R2 is hydrogen, lower-alkyl, or

phenyl-lower-alkyl; R3 is hydrogen, or lower-alkyl; and Z is a group II wherein X is hydrogen, halogen, lower-alkoxycarbonyl, lower-alkyl, Ph, phenyl-lower-alkyl, phenylcarbonyl, lower-alkanoyl, 1-piperidinyl, 4-morpholinyl-lower-alkyl, or phenoxy; and Y is the remaining atoms of a monocyclic or bicyclic substituted or unsubstituted heterocyclic ring system; or a pharmaceutically acceptable acid-addn. salt thereof, which inhibit the activity of serine proteases, specifically human leukocyte elastase, and are thus useful in the treatment of degenerative disease conditions. Thus, e.g., alkylation of 2,4-dioxo-4H-pyrido[1,2-a]pyrimidine with 2-chloromethyl-4-(3-methylbutyl)-5-methyl-1,2,5-thiadiazolidin-3-one 1,1-dioxide (prepn. given) afforded 2-(4-oxo-4H-pyrido[1,2-a]pyrimidin-2-ylloxymethyl)-4-(3-methylbutyl)-5-methyl-1,2,5-thiadiazolidin-3-one 1,1-dioxide (III) which exhibited  $K_i = 0.79$  nM for inhibition of human leukocyte elastase.

# MSTR 1



G4 = 32



G5 = Ph

G9 = (1-4) CH2

G10 = O

DER: or pharmaceutically acceptable acid addition salts

MPL: claim 1

NTE: incorporates broader disclosure

STE: enantiomers and racemic mixtures

L12 ANSWER 24 OF 33 MARPAT COPYRIGHT 2003 ACS

AN 124:274389 MARPAT

TI Color photographic material with excellent sharpness and color image-forming method

IN Deguchi, Yasuaki; Nakamura, Tetsuo

PA Fuji Photo Film Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 67 pp.

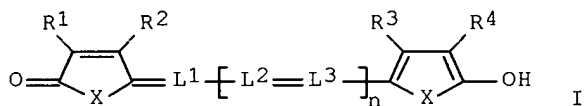
CODEN: JKXXAF

DT Patent

LA Japanese

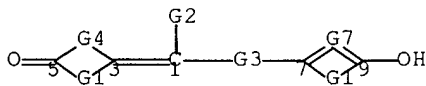
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08043968	A2	19960216	JP 1994-197795	19940729
PRAI	JP 1994-197795		19940729		
GI					



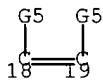
AB At least one of Ag halide emulsion layers contains .gtoreq.90 mol.% of AgCl and one of photog. layers contains I (X = O, S; L1-3 = methine; n = 0-2; R1-4 = H, substituent).

#### MSTR 1

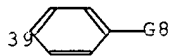


G1 = O

G4 = 18-5 19-3



G5 = alkoxy<(1-8)> / 39



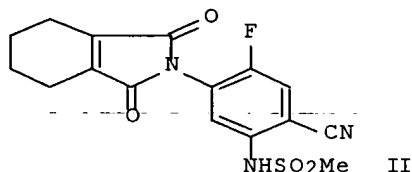
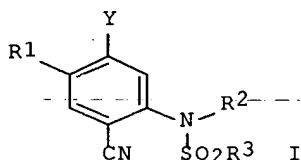
DER: and salts

MPL: claim 1

NTE: substitution is restricted

L12 ANSWER 25 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 124:145896 MARPAT  
 TI Preparation of 4-(heterocyclo)-2-(sulfonamido)benzonitrile selective herbicides  
 IN Drewes, Mark Wilhelm; Andree, Roland; Findeisen, Kurt; Haas, Wilhelm; Lender, Andreas; Linker, Karl-Heinz; Schallner, Otto; Dollinger, Markus; Santel, Hans-Joachim  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 26 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4414568	A1	19951102	DE 1994-4414568	19940427
	CA 2188796	AA	19951102	CA 1995-2188796	19950418
	WO 9529158	A1	19951102	WO 1995-EP1441	19950418
	W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9523082	A1	19951116	AU 1995-23082	19950418
	EP 757673	A1	19970212	EP 1995-916668	19950418
	EP 757673	B1	20011004		
	R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
	CN 1146763	A	19970402	CN 1995-192756	19950418
	CN 1075061	B	20011121		
	BR 9507537	A	19971118	BR 1995-7537	19950418
	JP 09512258	T2	19971209	JP 1995-527331	19950418
	ES 2164765	T3	20020301	ES 1995-916668	19950418
	US 5858925	A	19990112	US 1996-727501	19961021
	US 6100420	A	20000808	US 1998-153715	19980915
	US 6395683	B1	20020528	US 2000-643620	20000822
	CN 1308056	A	20010815	CN 2000-137047	20001227
PRAI	DE 1994-4414568		19940427		
	WO 1995-EP1441		19950418		
	US 1996-727501		19961021		
	US 1998-153715		19980915		
	US 1999-445500		19991115		
OS	CASREACT 124:145896				
GI					



AB The title compds. [I; R<sup>1</sup> = H, halogen; R<sup>2</sup> = H, CHO, (un)substituted

alkyl,

alkenyl, alkynyl, etc.; R3 = (un)substituted alkyl, cycloalkyl aryl, etc.;

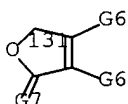
Y = (un)substituted heterocyclo], useful as selective herbicides, are prepd. Thus, 3,4,5,6-tetrahydrophthalic anhydride was condensed with 4-amino-5-fluoro-2-(methylsulfonylamino)benzonitrile, forming N-(4-cyano-2-fluoro-5-methylsulfonylamino)phenyl)-3,4,5,6-tetrahydrophthalimide, II, m.p. 113.degree.. At 30 g/ha, II demonstrated

little effect on barley, but 100% control of Abutilon and Amaranthus.

## MSTR 2

G1=O

G1 = 131



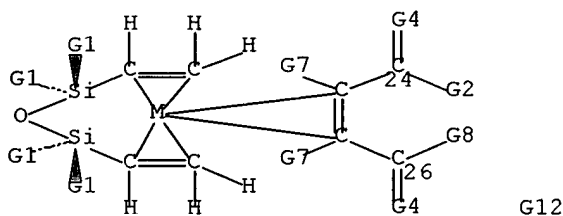
G6 = OH / Ph  
MPL: claim 4

L12 ANSWER 26 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 124:118278 MARPAT  
 TI Platinum complexes for light-activatable hydrosilylation catalysts  
 IN Meuser, Reinhard; Mignani, Gerard  
 PA Rhone Poulenc Chimie, Fr.  
 SO PCT Int. Appl., 51 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA French  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9525734	A1	19950928	WO 1995-FR328	19950317
	W: AU, CA, FI, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	FR 2717482	A1	19950922	FR 1994-3442	19940318
	FR 2717482	B1	19960621		
	CA 2185823	AA	19950928	CA 1995-2185823	19950317
	AU 9520762	A1	19951009	AU 1995-20762	19950317
	AU 680129	B2	19970717		
	EP 750623	A1	19970102	EP 1995-913212	19950317
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	JP 09507677	T2	19970805	JP 1995-524428	19950317
	FI 9603668	A	19961115	FI 1996-3668	19960917
PRAI	FR 1994-3442		19940318		
	WO 1995-FR328		19950317		

AB Catalyst systems consist of organoplatinum complexes that are photoactive in the hydrosilylation crosslinking of siloxanes contg. reactive hydrogen, vinyl, or epoxy groups. The complexes typically contain chromophoric ligands. The complexes have a degree of oxidn. of 0 and may be used in light-activatable and optionally heat-activatable, stable and high performance hydrosilylation catalyst systems. The systems are suitable for use in a silicone compn. which is light-cross-linkable by hydrosilylation and useful as a non-stick coating, e.g. for paper. A catalyst was prepd. by reacting Karstedt's catalyst with a .pi.-ligand such as maleic anhydride.

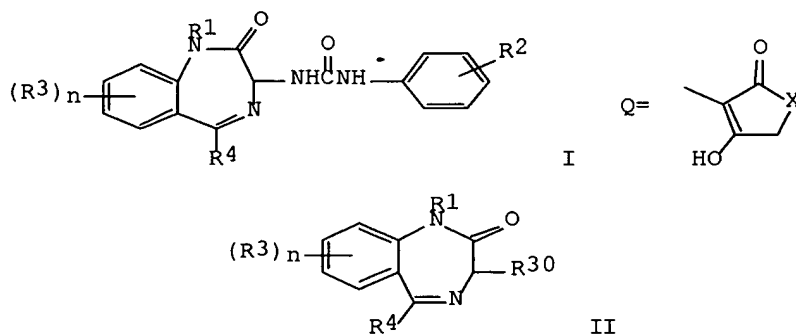
# MSTR 1A



G4 = O  
 G7 = Ph / alkoxy  
 G2 + G8 = O  
 MPL: claim 1

L12 ANSWER 27 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 119:225987 MARPAT  
 TI Preparation of 3-phenylureido-1,4-benzodiazepinones and their use as  
 cholecystokinin or gastrin antagonists  
 IN Chambers, Mark S.  
 PA Merck Sharp and Dohme Ltd., UK  
 SO Eur. Pat. Appl., 26 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

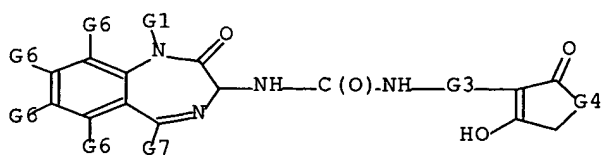
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 549039	A1	19930630	EP 1992-203903	19921212
	EP 549039	B1	19950809		
	R: CH, DE, FR, GB, IT, LI, NL				
	CA 2085656	AA	19930621	CA 1992-2085656	19921217
	JP 05345767	A2	19931227	JP 1992-355192	19921217
	JP 2571899	B2	19970116		
	US 5410049	A	19950425	US 1992-992217	19921217
PRAI	GB 1991-27115		19911220		
	GB 1992-17158		19920813		
OS	CASREACT 119:225987				
GI					



AB Title compds. I [R1 = H, C1-6 alkyl, C3-7 cycloalkyl, cyclopropylmethyl, CH2CO2R5 (R5 = C1-4 alkyl), CH2CONR6R7 (R6, R7 = H, C1-4 alkyl, or together form (CH2)4-5; R2 = Q (X = O, S, NR8 where R8 = H, C1-4 alkyl); R3 = C1-6 alkyl, halo, NR6R7; R4 = C1-7 alkyl, C3-7 cycloalkyl, C4-7 cycloalkylalkyl, (un)substituted aryl; n = 0-3] and their salts or prodrugs are prepd. as therapeutics, particularly for the treatment of panic, anxiety, or pain. Compds. I are prepd. by: (a) reaction of R31C6H4R2 with benzodiazepinones II (one of R30 or R31 is NH2, the other is N:C=O; other groups defined as above), or (b) reaction of II (R30 = activated carbamate) with H2NC6H4R2, in the presence of base. Pharmaceutical formulations contg. I are given (4 examples). Compds. I

(6 examples) exhibited IC50 of 7.5 to >3000 nM for 125I-CCK receptor binding (pancreas) and 0.67-16 nM for 125I-CCK receptor binding (brain) in vitro.

MSTR 1



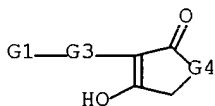
G3 = phenylene

G4 = O

DER: or salts or prodrugs

MPL: claim 1

### MSTR 3



G3 = phenylene

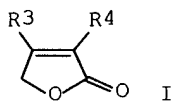
G4 = O

MPL: claim 8



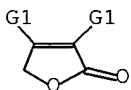
L12 ANSWER 28 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 118:233871 MARPAT  
 TI Preparation of .alpha.,.beta.-unsaturated .gamma.-butyrolactones from  
 acetylenes, carbon monoxide, and water  
 IN Tsuchiyama, Kazuo; Takahashi, Shigetoshi; Jo, Takashi  
 PA Sekisui Chemical Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04327583	A2	19921117	JP 1991-94238	19910424
	JP 3014162	B2	20000228		
PRAI	JP 1991-94238		19910424		
OS	CASREACT 118:233871				
GI					



AB Reaction of R1C.tplbond.CR2 (R1, R2 = H, alkyl, alkoxy, aryl, acyl,  
 carboxyl, ester, silyl, cyano) or R5C.tplbond.CR6 (R5 and/or R6 =  
 styryl;  
 other = ethylenic unsatd. group, H, alkyl, aryl, silyl) with CO and H2O  
 in presence of Ru catalysts gives butyrolactones I (R3 = R1, R4 = R2 or R3  
 = R2, R4 = R1) or styrylbutyrolactones I (R3 = R5, R4 = R6 or R3 = R6, R4  
 = R5). A mixt. of PhC.tplbond.CPh, Ru3(CO)12, H2O, NEt3, and THF were  
 heated under CO at 150 kg/cm2 and 120.degree. for 5 h to give 87% I (R3  
 = R4 = Ph).

## MSTR 2

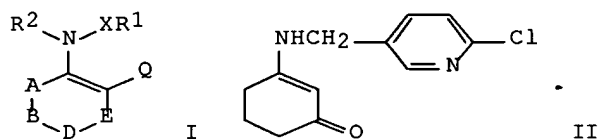


G1 = alkoxy / Ph  
 MPL: claim 1

L12 ANSWER 29 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 117:7806 MARPAT  
 TI Preparation of pyridylmethamine derivatives as insecticides  
 IN Ohishi, Haruhito; Iihama, Teruyuki; Ishimitsu, Keiichi; Yamada, Tomio  
 PA Nippon Soda Co., Ltd., Japan  
 SO PCT Int. Appl., 44 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

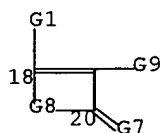
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9200964	A1	19920123	WO 1991-JP889	19910702
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
	JP 05004966	A2	19930114	JP 1991-187019	19910702
	EP 539588	A1	19930505	EP 1991-912066	19910702
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
PRAI	JP 1990-176462		19900705		
	JP 1990-209238		19900809		
	JP 1991-55562		19910228		
	WO 1991-JP889		19910702		

GI

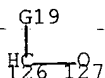


AB The title compds. [I; R1 = (substituted) 5- or 6-membered N heterocyclyl; X = alkylene, alkylidene; R2 = H, (substituted) alkyl, alkenyl, alkynyl, etc.; A, B, D = substituted C or hetero atom, single bond; E = CO, CS; Q = H, (substituted) alkyl, alkenyl, alkynyl, etc.] are prepd. Refluxing a mixt. of 1,3-cyclohexanedione, 2-chloro-5-pyridylmethamine, and toxic acid hydrate in MePh gave quant. II, which killed 100% aphids and green rice leaf hoppers at 125 ppm. Also prepd. and tested were 82 addnl. I.

## MSTR 2



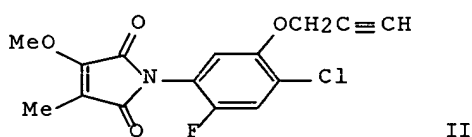
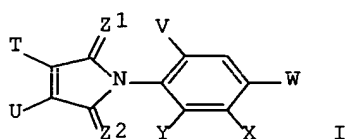
G5 = O  
 G7 = O  
 G8 = 126-18 127-20



G9 = Ph  
 MPL: claim 2

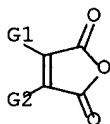
L12 ANSWER 30 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 115:29109 MARPAT  
 TI Preparation of N-phenylmaleimides and analogs as herbicides  
 IN Dorfmeister, Gabriele; Ganzer, Michael; Farnke, Wilfried; Johann, Gerhard; Rees, Richard  
 PA Schering A.-G., Germany  
 SO Ger. Offen., 10 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3927438	A1	19910221	DE 1989-3927438	19890817
PRAI	DE 1989-3927438		19890817		
OS	CASREACT 115:29109				
GI					



AB The title compds. [I; T = alkyl, Ph; U = (halo)alkoxy, (halo)alkenyloxy, (halo)alkynyloxy; V = H, F, Cl; W = H, halo; X = H, halo, trihalomethyl, OR1, SR1, CO2R2; WX = OCH2CONR3, SCONR3, OCONR3; R2, R3 = H, (halo)(cyclo)alkyl, (halo)alkenyl, etc.; R1 = groups cited for R2, carboxyalkyl, etc.; Y = H, F, Cl, (un)substituted NH2; Z1, Z2 = O, S] were  
 prepd. Thus, 2-methoxy-3-methylmaleic anhydride was condensed with  
 4-chloro-2-fluoro-5-propargyloxyaniline to give title compd. II which  
 gave  
 90-100% control of 10 weeds, e.g., Avena fatua, at 0.3 kg/ha  
 preemergent.

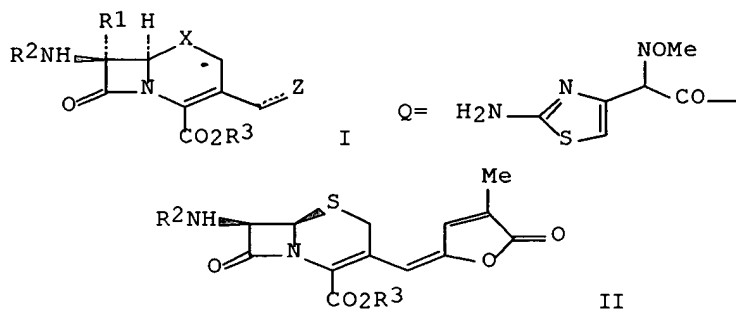
## MSTR 2



G1 = Ph  
 G2 = alkoxy<(1-4)> (SO (1-) G3)  
 MPL: claim 2

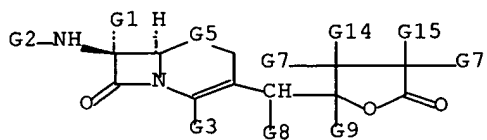
L12 ANSWER 31 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 113:114942 MARPAT  
 TI Preparation of 3-[(dihydrooxofuranylidine)methyl]cephemcarboxylates and  
 analogs as antibiotics  
 IN Burton, George; Fell, Stephen C. M.; Bateson, John Hargreaves  
 PA Beecham Group PLC, UK  
 SO Eur. Pat. Appl., 31 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 359536	A2	19900321	EP 1989-309271	19890912
	EP 359536	A3	19911113		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	DK 8904534	A	19900317	DK 1989-4534	19890914
	AU 8941404	A1	19900322	AU 1989-41404	19890914
	JP 02121995	A2	19900509	JP 1989-239792	19890914
	US 5064649	A	19911112	US 1989-407231	19890914
PRAI	GB 1988-21797		19880916		
GI					



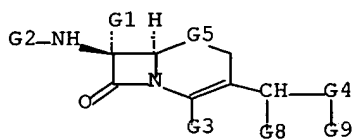
AB The title compds. [I; R1 = H, MeO, HCONH; R2 = acyl; R3 = H, carboxy  
 protective group, neg. charge; X = SOn, O, CH<sub>2</sub>; Z = (un)substituted  
 butenolide or butanalide ring; n = 0-2; dashed line = optional bond]  
 were  
 prepd. Thus, 2,5-dihydro-4-methyl-5-oxofuran-2-yl(triphenyl)phosphonium  
 bromide was treated with NaH in DMSO, diphenylmethyl 3-formyl-7.beta.-  
 phenylacetamidoceph-3-em-4-carboxylate added, and the whole stirred  
 .apprx.75 min to give oxofuranylidinemethylcephencarboxylate II (R2 =  
 PhCH<sub>2</sub>CO, R3 = CHPh<sub>2</sub>) which was deprotected to give II (R2 = H, R3 =  
 CHPh<sub>2</sub>). The latter was added to thiazolyliminoacetate QOH which had  
 been  
 treated with Et<sub>3</sub>N and MeSO<sub>2</sub>Cl in DMF to give, after sapon., II (R2 = Q,  
 R3 = Na) which had MIC of <0.03 and 1.0 .mu.g/mL against Escherichia coli  
 NCTC 10418 and Staphylococcus aureus Oxford, resp.

MSTR 1A

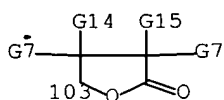


G7 = alkoxy / Ph  
 DER: or salts  
 MPL: claim 1

#### MSTR 1C

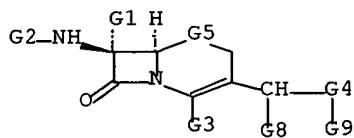


G4 = 103

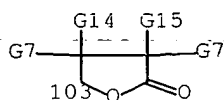


G7 = alkoxy / Ph  
 DER: or salts  
 MPL: claim 1

#### MSTR 1D



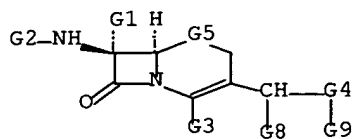
G4 = 103



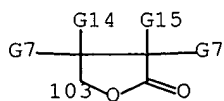
G7 = alkoxy / Ph  
 DER: or salts

MPL: claim 1

**MSTR 1E**

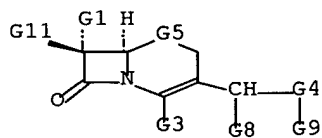


G4 = 103

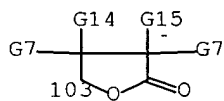


G7 = alkoxy / Ph  
DER: or salts  
MPL: claim 1

**MSTR 2**



G4 = 103



G7 = alkoxy / Ph  
DER: and protected derivatives  
MPL: claim 7

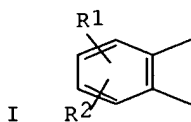
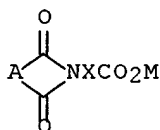
L12 ANSWER 32 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 113:58931 MARPAT  
 TI Preparation of imidoperoxycarboxylic acids as bleaching agents  
 IN Gethoeffer, Hanspeter; Reinhardt, Gerd  
 PA Hoechst A.-G., Germany  
 SO Ger. Offen., 8 pp.  
 CODEN: GWXXBX

DT Patent

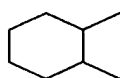
LA German

FAN.CNT 1

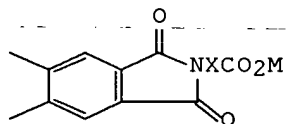
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3823172	A1	19900111	DE 1988-3823172	19880708
	DE 3823172	C2	19980122		
	IN 172852	A	19931218	IN 1989-CA472	19890620
	EP 349940	A1	19900110	EP 1989-112062	19890701
	EP 349940	B1	19980513		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	AT 166049	E	19980515	AT 1989-112062	19890701
	ES 2118055	T3	19980916	ES 1989-112062	19890701
	JP 02076850	A2	19900316	JP 1989-173163	19890706
	JP 3065322	B2	20000717		
	US 5061807	A	19911029	US 1989-376000	19890706
	NO 8902834	A	19900109	NO 1989-2834	19890707
	NO 175204	B	19940606		
	NO 175204	C	19940914		
	AU 8937934	A1	19900111	AU 1989-37934	19890707
	AU 624392	B2	19920611		
	BR 8903368	A	19900213	BR 1989-3368	19890707
	ZA 8905178	A	19900328	ZA 1989-5178	19890707
	CA 1340443	A1	19990316	CA 1989-605008	19890707
	IN 176337	A	19960427	IN 1992-CA612	19920825
	US 5994284	A	19991130	US 1996-728533	19961009
PRAI	DE 1988-3823172		19880708		
	IN 1989-CA472		19890620		
	US 1989-376000		19890706		
	US 1991-746929		19910819		
	US 1995-456293		19950531		
OS	CASREACT 113:58931				
GI					



II



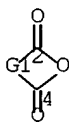
III



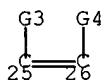
IV

AB The title compds. I (A = R1CH(CH2)nCHR2, R1C:CR2, II, III, or IV where  
 R1 = H, Cl, Br, C1-20 alkyl, C2-20 alkenyl, aryl, or alkylaryl; R2 = H, Cl, Br, SO3M, CO2M, or OSO3M; X = C3-19 alkylene or arylene; M = H, alkali metal, ammonium, or alkali earth metal) are prepd. as stable bleaching, oxidizing, and purifn. agents. Thus, .omega.-phthalimidoperoxybutanoic acid (V) was prepd. by dissolving .omega.-phthalimidobutanoic acid in H2SO4 and adding H2O2. V showed only a 1.4% loss in activity upon storage for 4 wk at 25.degree..

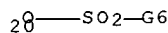
**MSTR 2A**



G1 = 25-2 26-4



G3 = Ph (SO (1-) alkyl<(1-4)>)  
 G4 = 20



MPL: claim 3



L12 ANSWER 33 OF 33 MARPAT COPYRIGHT 2003 ACS  
 AN 112:2611 MARPAT  
 TI Plant growth regulators containing succinic anhydrides or succinimides  
 IN Terachi, Tsutomu; Yamamura, Atsushi; Kamuro, Yasuo; Hirai, Yasuichi;  
 Fujii, Seiichi  
 PA Fujisawa Pharmaceutical Co., Ltd., Japan; Nissan Chemical Industries,  
 Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 64000006	A2	19890105	JP 1988-70538	19880323
	US 4957537	A	19900918	US 1988-171799	19880322
PRAI	JP 1987-69370		19870324		

GI For diagram(s), see printed CA Issue.

AB Plant growth regulators contg. .gtoreq.1 title compd. I [R1 = H, alkyl, NO2, halo, (mono- or di-alkyl- or -alkoxy-substituted) Ph; R2 = H, halo, alkoxy, (alkoxycarbonyl-substituted) alkylthio, (halo- or alkyl-substituted) PhS, PhNH, PhSO2, (alkyl-substituted)

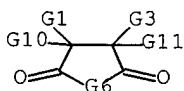
heterocyclylthio;

X = O, NZ; Z = H, (OH- or alkanoyloxy-substituted) alkyl, CO2H, etc.] or .gtoreq.1 I and ethephon are prepd. as fruit abscission agents. A soln. of PhSH and 2-(3-chlorophenyl)maleimide in EtOH was refluxed to give 2-(3-chlorophenyl)-3-phenylthiosuccinimide. 2-(2-

Chlorophenyl)succinimide

at 500 pm was sprayed on kumquat trees and av. 97.5% the fruits were easily removed. An emulsion was formulated contg. 2-(4-chlorophenyl)-3-phenylsuccinimide 20, xylene 30, isophorone 30, and Sorpol 9048 20 parts.

# MSTR 1A



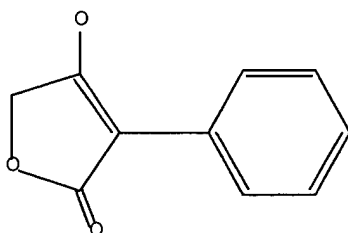
G1 = Ph (SO (1-) G2)

G3 = loweralkoxy

G6 = O

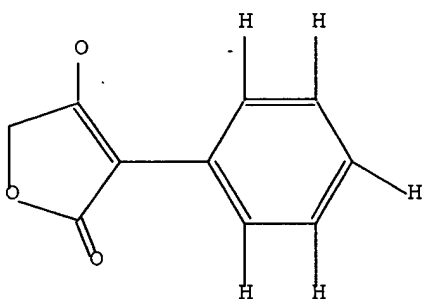
MPL: claim 1

=> d l1; d l5; d his; log y  
 L1 HAS NO ANSWERS  
 L1 STR



Structure attributes must be viewed using STN Express query preparation.

L5 HAS NO ANSWERS  
 L5 STR



Structure attributes must be viewed using STN Express query preparation.

(FILE 'HOME' ENTERED AT 16:52:29 ON 07 MAY 2003)  
 FILE 'REGISTRY' ENTERED AT 16:52:37 ON 07 MAY 2003

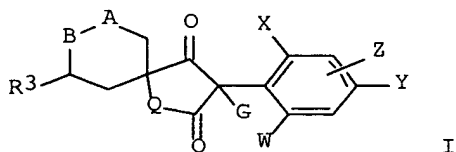
L1 STRUCTURE UPLOADED  
 L2 50 S L1  
 L3 1442 S L1 FUL  
 FILE 'CAPLUS' ENTERED AT 16:53:15 ON 07 MAY 2003  
 L4 346 S L3  
 FILE 'STNGUIDE' ENTERED AT 16:54:18 ON 07 MAY 2003  
 FILE 'REGISTRY' ENTERED AT 16:56:39 ON 07 MAY 2003  
 L5 STRUCTURE UPLOADED  
 L6 15 S L5 SAM SUB=L3  
 L7 304 S L5 FUL SUB=L3  
 L8 1138 S L3 NOT L7  
 FILE 'CAPLUS' ENTERED AT 16:57:28 ON 07 MAY 2003  
 L9 186 S L8  
 FILE 'MARPAT' ENTERED AT 17:02:17 ON 07 MAY 2003  
 L10 2 S L3  
 L11 75 S L3 FUL  
 L12 33 S L11 NOT L4

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	194.44	1222.57
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-20.46	-141.55

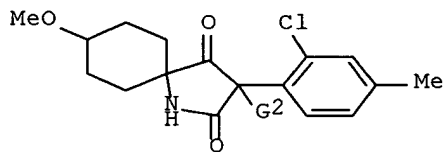
STN INTERNATIONAL LOGOFF AT 17:04:02 ON 07 MAY 2003

L6 ANSWER 1 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2003:282535 CAPLUS  
 TI Preparation of spirocyclic 4-oxo-3-phenyl-3-substituted lactams and  
 lactones as pesticides/herbicides.  
 IN Fischer, Reiner; Ullmann, Astrid; Bretschneider, Thomas; Drewes, Mark  
 Wilhelm; Erdelen, Christoph; Feucht, Dieter; Reckmann, Udo  
 PA Bayer Cropscience Ag, Germany  
 SO PCT Int. Appl., 140 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003029213	A1	20030410	WO 2002-EP10158	20020911
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 10146910	A1	20030410	DE 2001-10146910	20010924
PRAI	DE 2001-10146910	A	20010924		
GI					



I



II

AB Title compds. I [W = CN, halo, alk(en/yn)yl, alkoxy, haloalkyl,  
 haloalkoxy; X = H, alkyl, alkoxy, haloalkyl, haloalkoxy, CN; Y = H,  
 halo,  
 alkyl, alkoxy, haloalkyl, haloalkoxy, CN; Z = H, halo, alkyl, alkoxy,  
 haloalkyl, haloalkoxy, CN; A-B = CH<sub>2</sub>CHOR<sub>1</sub>, OCH<sub>2</sub>; G = halo, NO<sub>2</sub>; R<sub>1</sub> =  
 alkyl; R<sub>3</sub> = H, alkyl; Q = NH, O] are prepd. For instance, II [G<sub>2</sub> = Cl]  
 is  
 prepd. via treatment of the prior art precursor II [G<sub>2</sub> = H] with  
 sulfonyl

chloride (CHCl<sub>3</sub>, 0.degree.) in 48% yield. I are tested for insecticidal activity against species, such as Myzus persicae, Aphis gossypi, and Tetranychus urticae.

IT 186647-68-7

RL: RCT (Reactant); RACT (Reactant or reagent)

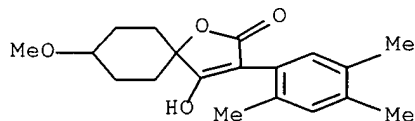
(prepn. of spirocyclic 4-oxo-3-Ph-3-substituted lactams and lactones

as

pesticides/herbicides)

RN 186647-68-7 CAPLUS

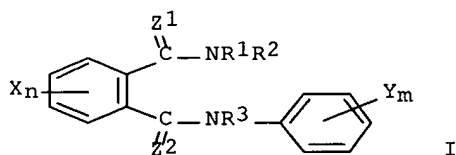
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methoxy-3-(2,4,5-trimethylphenyl)- (9CI) (CA INDEX NAME)



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2002:849349 CAPLUS  
 DN 137:334257  
 TI Pesticides containing phthalamide derivatives  
 IN Sakata, Kazuyuki; Morimoto, Masayuki; Kodama, Hiroshi; Nishimatsu, Tetsuyosi  
 PA Nihon Nohyaku Co., Ltd., Japan  
 SO PCT Int. Appl., 96 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002087334	A1	20021107	WO 2002-JP3780	20020416
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2003012415	A2	20030115	JP 2002-115393	20020417
PRAI	JP 2001-118840	A	20010417		
	JP 2001-129588	A	20010426		
OS	MARPAT 137:334257				
GI					



AB A pesticide contains .gtoreq. 1 compd. selected from the group consisting of phthalamide derivs. (I) in combination with synergistic insecticides, acaricides, and/or nematocides. In the formula (I), R1, R2, and R3 may be the same or different and each represents hydrogen, C3-6 cycloalkyl, etc.;

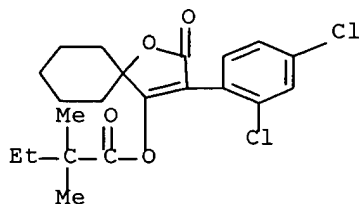
X and Y may be the same or different and each represents hydrogen, halogen, etc.; n is an integer of 1 to 4; m is an integer of 1 to 5; and Z1 and Z2 each represents oxygen or sulfur. For example, N2-(1,1-dimethyl-2-methylthioethyl)-3-iodo-N1-{2-methyl-4-[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]phenyl}phthalamide in combination with acaricides, insecticides, or nematocides are claimed.

IT **148477-71-8, Spirodiclofen**  
 RL: AGR (Agricultural use); BCP (Biochemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
 (acaricides, insecticides, nematocides with phthalamide derivs. as

synergistic pesticides)

RN 148477-71-8 CAPLUS

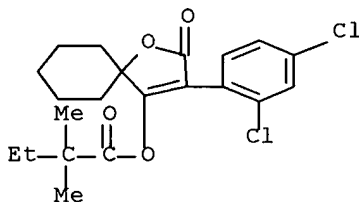
CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RE.CNT 6      THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

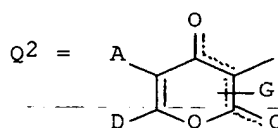
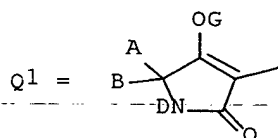
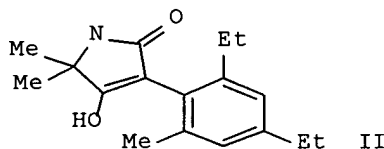
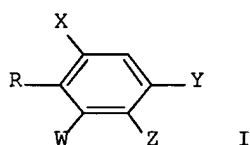
L6 ANSWER 3 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2002:428627 CAPLUS  
 DN 137:1951  
 TI Synergistic insecticidal and acaricidal compns. containing neem extract  
 IN Baron, Gerhard; Kilian, Michael; Rosenfeldt, Frank  
 PA Bayer Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002043496	A2	20020606	WO 2001-EP13340	20011119
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ,				
TM	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 10059606	A1	20020606	DE 2000-10059606	20001201
	AU 2002018304	A5	20020611	AU 2002-18304	20011119
PRAI	DE 2000-10059606	A	20001201		
	WO 2001-EP13340	W	20011119		
AB	The title compns. comprise neem seed ext. and any of 35 known insecticides and acaricides.				
IT	<b>148477-71-8D</b> , Spirodiclofen, mixt. with neem ext. RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (synergistic insecticidal and acaricidal compn.)				
RN	148477-71-8 CAPLUS				
CN	Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1- oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)				



L6 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:747747 CAPLUS  
 DN 135:288687  
 TI Preparation of aryl-substituted heterocyclic ketoenols as pesticides and herbicides.  
 IN Ruther, Michael; Hagemann, Hermann; Schneider, Udo; Dollinger, Markus; Dahmen, Peter; Wachendorff-neumann, Ulrike; Fischer, Reiner; Graff, Alan;  
 Bretschneider, Thomas; Erdelen, Christoph; Drewes, Mark Wilhelm; Feucht, Dieter; Lieb, Folker  
 PA Bayer Aktiengesellschaft, Germany; et al.  
 SO PCT Int. Appl., 243 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2001074770	A1	20011011	WO 2001-EP3215	20010321	
	W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
	DE 10016544	A1	20011011	DE 2000-10016544	20000403	
	EP 1280770	A1	20030205	EP 2001-917102	20010321	
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR		
	BR 2001009750	A	20030225	BR 2001-9750	20010321	
PRAI	DE 2000-10016544	A	20000403			
	WO 2001-EP3215	W	20010321			
OS	MARPAT 135:288687					
GI						



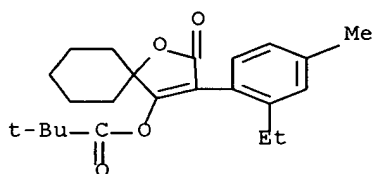
AB Title compds. I; [W = H, alkyl, alkenyl, alkynyl; X = alkyl, alkenyl, alkynyl; Y = H, Me, Et, Me<sub>2</sub>CH, alkenyl, alkynyl; Z = H, alkyl, alkenyl,



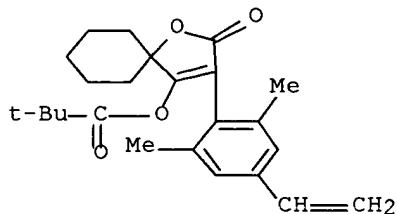
alkynyl; .gtoreq.1 of W, X, Y, Z = chain contg. .gtoreq.2 C atoms; R = Q1,  
Q2, etc.; A = H, (halo-substituted) alkyl, alkenyl, alkoxyalkyl, (substituted) (hetero)cycloalkyl, etc.; B = H, alkyl, alkoxyalkyl; AB, AD  
= atoms to form a (substituted) (heterocyclic) ring; D = H, (substituted) alkyl, alkenyl, alkynyl, alkoxyalkyl, (unsatd.) (hetero)cycloalkyl, etc.;  
G = H, acyl], were prepd. Thus, 2,4-diethyl-6-methylphenylacetic acid was stirred with SOCl<sub>2</sub> and the residue in THF was added to a 0-10.degree. soln. of Me 2-amino-2-methylpropionate and Et<sub>3</sub>N in THF followed by stirring from 1 h to give 66% amide, which was heated with KOtBu in DMF to give 58% title compd. (II). II at 1000 ppm gave 100% kill of Nephotettix cincticeps on rice seedlings.

IT **364374-43-6P 364374-44-7P 364374-45-8P 364374-46-9P 364374-47-0P 364374-49-2P 364374-50-5P 364374-51-6P**  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of aryl-substituted heterocyclic ketoenols as pesticides and herbicides)

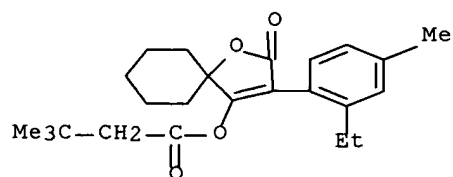
RN 364374-43-6 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 3-(2-ethyl-4-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 364374-44-7 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 3-(4-ethenyl-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

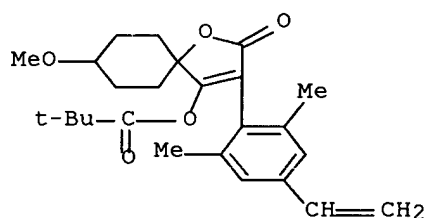


RN 364374-45-8 CAPLUS  
 CN Butanoic acid, 3,3-dimethyl-, 3-(2-ethyl-4-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



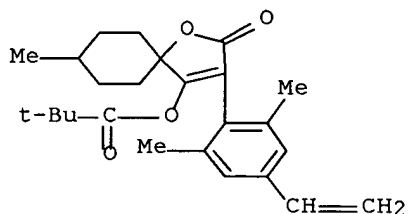
RN 364374-46-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-ethenyl-2,6-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



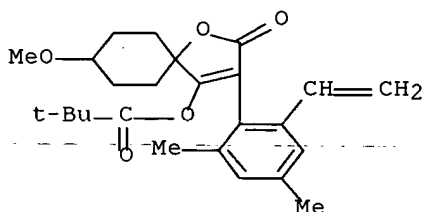
RN 364374-47-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-ethenyl-2,6-dimethylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 364374-49-2 CAPLUS

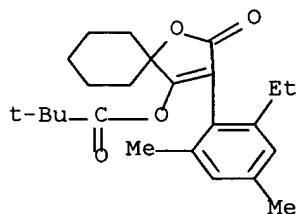
CN Propanoic acid, 2,2-dimethyl-, 3-(2-ethenyl-4,6-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 364374-50-5 CAPLUS

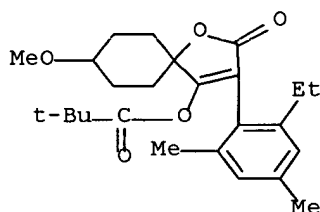
CN Propanoic acid, 2,2-dimethyl-, 3-(2-ethyl-4,6-dimethylphenyl)-2-oxo-1-

oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 364374-51-6 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-ethyl-4,6-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



IT 364374-40-3P 364374-41-4P 364374-42-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

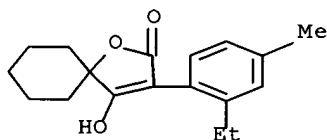
RACT

(Reactant or reagent)

(prepn. of aryl-substituted heterocyclic ketoenols as pesticides and herbicides)

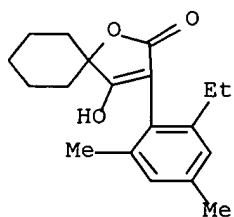
RN 364374-40-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-ethyl-4-methylphenyl)-4-hydroxy-(9CI)  
(CA INDEX NAME)



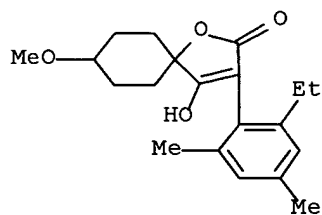
RN 364374-41-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-ethyl-4,6-dimethylphenyl)-4-hydroxy-(9CI) (CA INDEX NAME)



RN 364374-42-5 CAPLUS

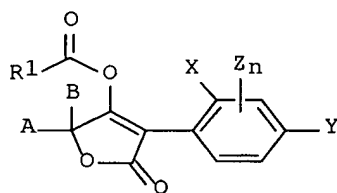
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-ethyl-4,6-dimethylphenyl)-4-hydroxy-  
8-  
methoxy- (9CI) (CA INDEX NAME)



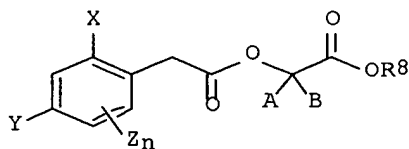
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:693301 CAPLUS  
 DN 135:257136  
 TI Process for the production of spirocyclic tetronic acid derivatives  
 IN Falbe, Volker; Kulkarni, Shekhar V.  
 PA Bayer Aktiengesellschaft, Germany; Bayer Corporation  
 SO PCT Int. Appl., 33 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

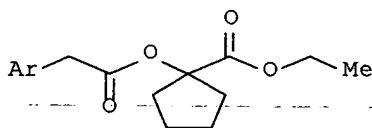
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001068625	A1	20010920	WO 2001-EP2440	20010305
	W:				
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	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	DE 10012825	A1	20011206	DE 2000-10012825	20000316
	EP 1272480	A1	20030108	EP 2001-923629	20010305
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2001039355	A1	20011108	US 2001-804273	20010312
	US 6476251	B2	20021105		
PRAI	DE 2000-10012825	A	20000316		
	WO 2001-EP2440	W	20010305		
OS	CASREACT 135:257136; MARPAT 135:257136				
GI					



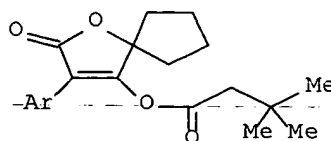
I



II



III



IV

AB Disclosed is a process for the prodn. of I, by reaction of II with a base

and Hal-C(O)-R1 [X = alkyl, halo(alkyl), alkoxy; Y = H, alkyl, halo(alkyl), alkoxy; Z = alkyl, halo, alkoxy; n = 0 - 3, A = alk(en)yl, (poly)alkoxyalkyl, alkylthioalkyl, etc.; B = (alkoxy)alkyl or A and B together with the C atom to which they are bound = (un)substituted (hetero)cyclic; R1 = halo, alkoxy, alkenyl(oxy), alkoxyalkyl, etc; R8 = alkyl; Hal = halo]. Two examples were provided. Treatment of III [Ar = 2,4,6-Me3Ph] with NaOH (1.1 equiv.) at 200 mbar with heating in DMF resulted in cyclization with concomitant distn. of ethanol. The intermediate enol ether sodium salt was treated with 3,3-dimethylbutyryl chloride (Et3N, methylcyclohexane) to give tetronic acid IV.

IT 148476-22-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

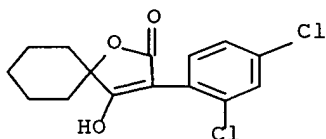
RACT

(Reactant or reagent)

(process for the prodn. of spirocyclic tetronic acid derivs.)

RN 148476-22-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-hydroxy- (9CI)  
(CA INDEX NAME)



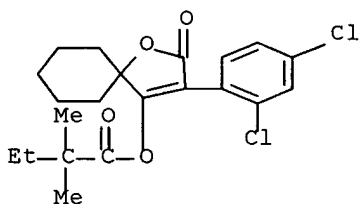
IT 148477-71-8P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(product; process for the prodn. of spirocyclic tetronic acid derivs.)

RN 148477-71-8 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2003 ACS

AN 2001:359738 CAPLUS

DN 134:362766

TI Synergistic insecticidal and acaricidal compositions

IN Brueck, Ernst; Erdelen, Christoph; Fischer, Reiner

PA Bayer Aktiengesellschaft, Germany

SO PCT Int. Appl., 78 pp.

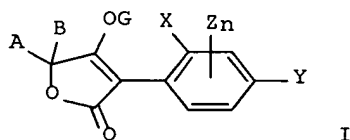
CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001033966	A2	20010517	WO 2000-EP10620	20001027
	WO 2001033966	A3	20011101		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	BR 2000015453	A	20020709	BR 2000-15453	20001027
	EP 1229791	A2	20020814	EP 2000-974473	20001027
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL			
	JP 2003513892	T2	20030415	JP 2001-535987	20001027
PRAI	DE 1999-19953775	A	19991109		
	WO 2000-EP10620	W	20001027		
OS	MARPAT 134:362766				
GI					



AB The title compns. comprise cyclic ketoenols I [X = halo, (halo)alkyl or alkoxy; Y = H or X; Z = alkyl, halo or alkoxy; n = 0-3; A, B = H (halo)alkyl, (halo)alkenyl, etc.; ACB = ring; G = H, COR1, CO2R2, etc.; R1, R2 = (halo)alkyl, (halo)alkenyl, etc.] and any of 95 known insecticides.

IT **339524-27-5 339524-28-6**

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(synergistic insecticidal and acaricidal compn.)

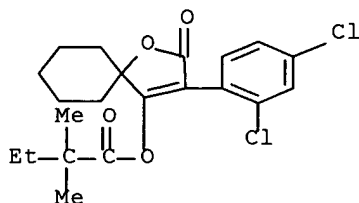
RN 339524-27-5 CAPLUS

CN Cyclopropanecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-, cyano(4-fluoro-3-phenoxyphenyl)methyl ester, mixt. with 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2,2-dimethylbutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

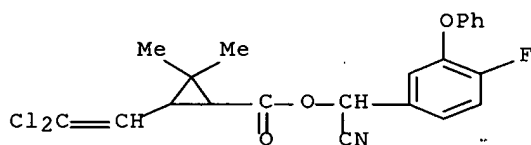
CMF C21 H24 Cl2 O4



CM 2

CRN 68359-37-5

CMF C22 H18 Cl2 F N O3



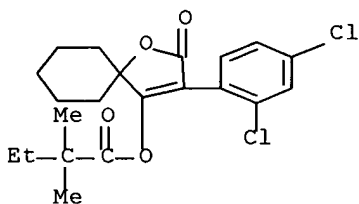
RN 339524-28-6 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with O,S-dimethyl phosphoramidothioate (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

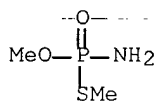
CMF C21 H24 Cl2 O4



CM 2

CRN 10265-92-6

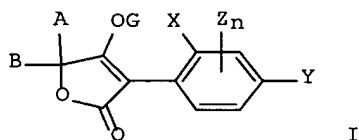
CMF C2 H8 N O2 P S





L6 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:265210 CAPLUS  
 DN 134:262335  
 TI Synergistic insecticidal and acaricidal compositions.  
 IN Fischer, Reiner; Erdelen, Christoph  
 PA Bayer A.-G., Germany  
 SO PCT Int. Appl., 54 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001024634	A1	20010412	WO 2000-EP9323	20000925
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	DE 19948129	A1	20010412	DE 1999-19948129	19991007
	BR 2000014610	A	20020611	BR 2000-14610	20000925
	EP 1221845	A1	20020717	EP 2000-967765	20000925
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	JP 2003510339	T2	20030318	JP 2001-527648	20000925
PRAI	DE 1999-19948129	A	19991007		
	WO 2000-EP9323	W	20000925		
OS	MARPAT 134:262335				
GI					



AB The title compns. comprise the cyclic ketoenols I [X = halo, (halo)alkyl or alkoxy; Y = H or X; Z = halo, alkyl or alkoxy; n = 0-3; A, B = halo, (halo)alkyl, (halo)alkenyl, etc.; ACB = ring; G = H, COR, etc.; R = (halo)alkyl, (halo)alkenyl, alkoxyalkyl, etc.] and agonists or antagonists of nicotinerbic acetylcholine receptors.

IT 332121-89-8 332154-06-0

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (synergistic insecticidal and acaricidal compn.)

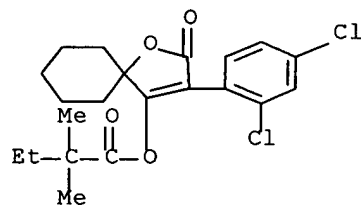
RN 332121-89-8 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with [3-[(6-chloro-3-pyridinyl)methyl]-2-thiazolidinylidene]cyanamide (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

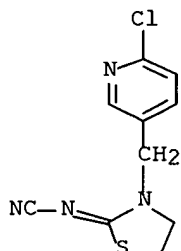
CMF C21 H24 Cl2 O4



CM 2

CRN 111988-49-9

CMF C10 H9 Cl N4 S



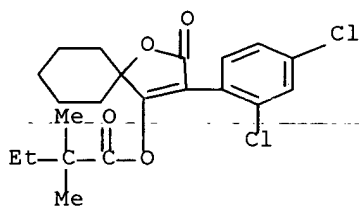
RN 332154-06-0 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

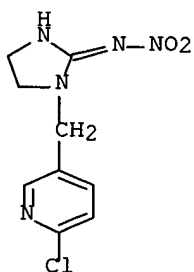
CMF C21 H24 Cl2 O4



CM 2

CRN 138261-41-3

CMF C9 H10 Cl N5 O2

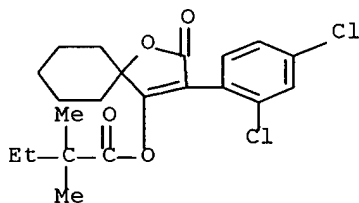


IT **148477-71-8D**, mixts. with agonists or antagonists of nicotinerbic acetylcholine receptors

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (synergistic insecticidal and acaricidal compns.)

RN 148477-71-8 CAPLUS

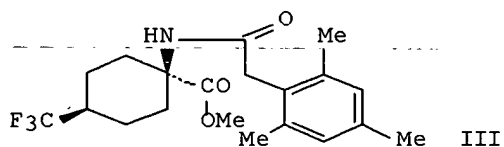
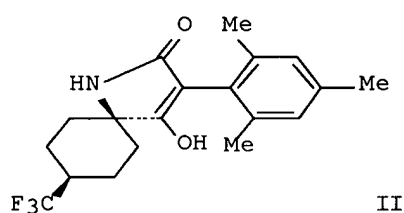
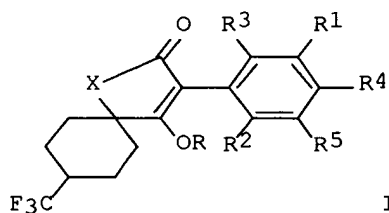
CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:247313 CAPLUS  
 DN 134:280721  
 TI Preparation of trifluoromethyl spirocyclic ketoenols for use as  
 pesticides  
 and herbicides  
 IN Fischer, Reiner; Graff, Alan; Bretschneider, Thomas; Erdelen, Christoph;  
 Drewes, Mark Wilhelm; Feucht, Dieter  
 PA Bayer Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 144 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001023354	A2	20010405	WO 2000-EP9270	20000919
	WO 2001023354	A3	20020228		
	W:		AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:		GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
	DE 19946625	A1	20010405	DE 1999-19946625	19990929
	BR 2000014352	A	20020611	BR 2000-14352	20000919
	EP 1220841	A2	20020710	EP 2000-967741	20000919
	R:		AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL		
	JP 2003510308	T2	20030318	JP 2001-526508	20000919
PRAI	DE 1999-19946625	A	19990929		
	WO 2000-EP9270	W	20000919		
OS	MARPAT 134:280721				
GI					



AB Spirocyclic ketoenols, such as I [X = O, NH; R = H, acyl, alkyloxycarbonyl, etc.; R1 = H, halogen, alkyl, alkoxy; R2 = H, CN, NO2, Ph, PhO, PhS, alkyl, alkenyl, alkynyl, alkoxy, haloalkyl, haloalkoxy, phenylalkoxy, phenylalkylthio; R3 = H, CN, NO2, Ph, PhS, PhO, alkyl, alkenyl, alkynyl, alkoxy, haloalkyl, haloalkoxy, phenylalkoxy, phenylalkylthio; R4 = H, CN, NO2, halogen, alkyl, alkoxy, haloalkyl, haloalkyloxy; R5 = H, CN, NO2, OH, PhS, PhO, halogen, alkyl, alkoxy, haloalkyl, haloalkoxy, heteroaryloxy, phenylalkoxy, phenylalkylthio], were

prepd. for use as pesticides and herbicides. Thus, spirocyclic ketoenol II was prep'd. in 74% yield by intramol. cyclocondensation of ester III, which was prep'd. starting from 4-(trifluoromethyl)cyclohexanone and mesityleneacetyl chloride. The prep'd. spirocyclic ketoenols were tested for insecticidal activity against species, such as *Myzus persicae*, *Aphis gossypii*, and *Tetranychus urticae*.

IT 332348-66-0P 332348-69-3P 332348-73-9P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation);

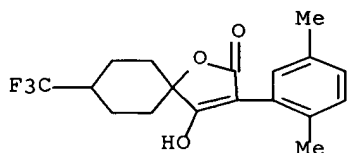
RACT

(Reactant or reagent); USES (Uses)

(prepn. of trifluoromethyl spirocyclic ketoenols for use as pesticides and herbicides)

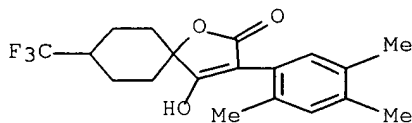
RN 332348-66-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,5-dimethylphenyl)-4-hydroxy-8-(trifluoromethyl)- (9CI). (CA INDEX NAME)



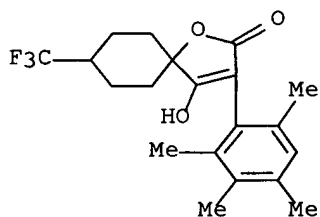
RN 332348-69-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-(trifluoromethyl)-3-(2,4,5-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 332348-73-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,3,4,6-tetramethylphenyl)-8-(trifluoromethyl)- (9CI) (CA INDEX NAME)



IT 332348-75-1P 332348-77-3P 332348-80-8P

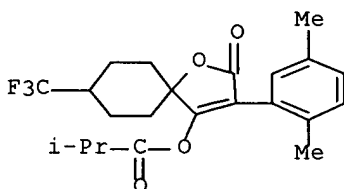
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of trifluoromethyl spirocyclic ketoenols for use as

pesticides

and herbicides)

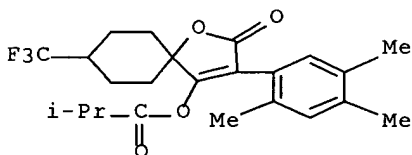
RN 332348-75-1 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,5-dimethylphenyl)-2-oxo-8-(trifluoromethyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



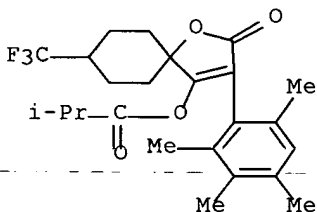
RN 332348-77-3 CAPLUS

CN Propanoic acid, 2-methyl-, 2-oxo-8-(trifluoromethyl)-3-(2,4,5-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

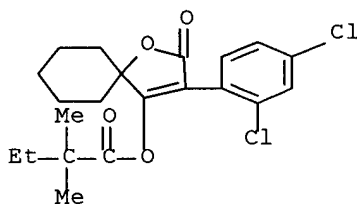


RN 332348-80-8 CAPLUS

CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,3,4,6-tetramethylphenyl)-8-(trifluoromethyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

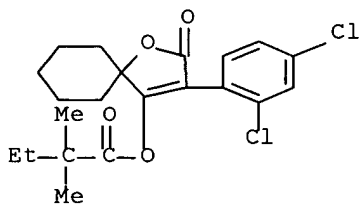


L6 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:5894 CAPLUS  
 DN 134:143261  
 TI Efficacy of BAJ 2740, a new acaricidal tetronic acid derivative, against tetranychid spider mite species resistant to conventional acaricides  
 AU Nauen, R.; Stumpf, N.; Elbert, A.  
 CS Agrochemicals Division, Bayer AG, Leverkusen, D-51368, Germany  
 SO BCPC Conference--Pests & Diseases (2000), (Vol. 1), 453-458  
 CODEN: BCDCAE  
 PB British Crop Protection Council  
 DT Journal  
 LA English  
 AB BAJ 2740 (ISO proposed common name: spirodiclofen) is a new acaricidal compd. particularly active against spider mites, e.g. the two-spotted spider mite, *Tetranychus urticae*, and the European red mite, *Panonychus ulmi*. BAJ 2740 is a phenyl-substituted spirocyclic tetronic acid deriv.,  
 i.e. it belongs to a new class of chem. The compd. is active against eggs, larvae, nymphs, all quiescent stages, and adult females. The baseline susceptibilities of several strains of *T. urticae* and *P. ulmi* were similar as shown by a larvae spray bioassay. BAJ 2740 was fully active to several strains of *T. urticae* showing resistance to organophosphates, hexythiazox, dicofol, clofentezine, pyridaben, fenpyroximate, abamectin and others. Addnl. cross-resistance to organophosphates, hexythiazox and clofentezine was not detected in *P. ulmi*. Furthermore a field-derived population of *T. urticae* was artificially selected in the lab., but even after treatment of 29 generations resistance factors had risen only very moderately in this population.  
 IT **148477-71-8**, BAJ 2740  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)  
 (spirodiclofen; efficacy against tetranychid spider mite species resistant to conventional acaricides)  
 RN 148477-71-8 CAPLUS  
 CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 -----ALL CITATIONS AVAILABLE IN THE RE-FORMAT-----

L6 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2001:5863 CAPLUS  
 DN 134:143250  
 TI BAJ2740, a novel broad spectrum acaricide  
 AU Wachendorff, U.; Bruck, E.; Elbert, A.; Fischer, R.; Nauen, R.; Stumpf, N.; Tiemann, R.  
 CS Crop Protection Business Group, Bayer AG, Leverkusen, D-51368, Germany  
 SO BCPC Conference--Pests & Diseases (2000), (Vol. 1), 53-58  
 CODEN: BCDCAE  
 PB British Crop Protection Council  
 DT Journal  
 LA English  
 AB BAJ2740 (proposed common name: spirodiclofen) is a novel acaricide from the new chem. class of tetronic acids. The compd. provides excellent control of important mite pests such as Panonychus spp., Phyllocoptruta spp., Brevipalpus spp., and Aculus and Tetranychus species. Use rates range from 50 to 200 g a.i./1000 L. It shows no cross-resistance to currently available acaricides and although the mode of action is still under investigation, there is strong evidence that the compd. interferes with the mite development. Therefore the onset of activity of BAJ2740 is somewhat slower compared to that of acutely acting acaricides but significantly faster than that of chitin synthesis inhibitors. The residual efficacy of BAJ2740 is outstanding. The compd. has no impact on beneficial insects and is safe or only slightly harmful to beneficial mites depending on the use pattern.. BAJ2740 is safe to users and consumers and has a favorable environmental profile. Its broad spectrum of activity, excellent long lasting efficacy, good plant compatibility in all relevant crops and lack of cross-resistance make BAJ2740 an excellent compd. for the use in the most important markets for specific acaricides, e.g. citrus, pome fruits, stone fruits, grapes and nuts.  
 IT **148477-71-8, Spirodiclofen**  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)  
 (BAJ 2740; novel broad spectrum acaricide)  
 RN 148477-71-8 CAPLUS  
 CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



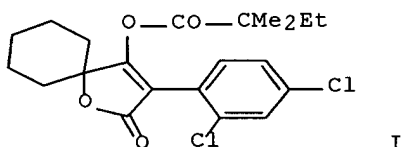
RE.CNT 4      THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT



L6 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 2000:275391 CAPLUS  
 DN 132:289968  
 TI Synergistic insecticidal and acaricidal compns.  
 IN Fischer, Reiner; Erdelen, Christoph  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 16 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19939395	A1	20000427	DE 1999-19939395	19990819
	KR 2000028735	A	20000525	KR 1999-41893	19990930
	AU 9952680	A1	20000504	AU 1999-52680	19991005
	NL 1013258	A1	20000426	NL 1999-1013258	19991011
	NL 1013258	C2	20001114		
	JP 2000128710	A2	20000509	JP 1999-295578	19991018
	IT 99MI2188	A1	20010419	IT 1999-MI2188	19991019
	FR 2784859	A1	20000428	FR 1999-13213	19991022
	FR 2784859	B1	20010601		
	CN 1252220	A	20000510	CN 1999-123326	19991022
	BR 9905110	A	20000815	BR 1999-5110	19991022
	ZA 9906662	A	20001023	ZA 1999-6662	19991022
PRAI	DE 1998-19848892	A1	19981023		

GI.



AB The title compns. comprise the dihydrofuranon deriv. I and any of a large

no. of known insecticides and acaricides.

IT 263895-47-2 263895-48-3 263895-49-4  
 263895-50-7 263895-51-8 263895-52-9  
 263895-53-0 263895-54-1 263895-55-2  
 263895-56-3 263895-57-4 263895-58-5  
 263895-59-6 263895-60-9 263895-61-0  
 263895-62-1 263895-63-2 263895-64-3  
 263895-65-4 263895-66-5 264189-82-4

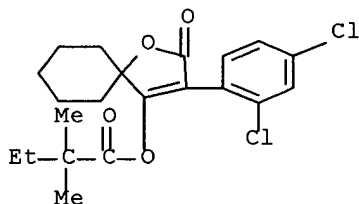
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
 (synergistic insecticidal and acaricidal compn.)

RN 263895-47-2 CAPLUS

CN AVermectin B1, mixt. with 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2,2-dimethylbutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8  
CMF C21 H24 Cl2 O4



CM 2

CRN 71751-41-2  
CMF Unspecified  
CCI MAN

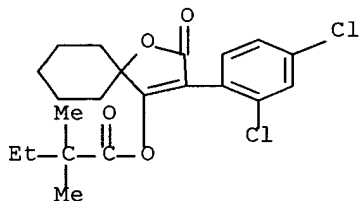
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

RN 263895-48-3 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 2-(acetyloxy)-3-dodecyl-1,4-naphthalenedione (9CI) (CA INDEX NAME)

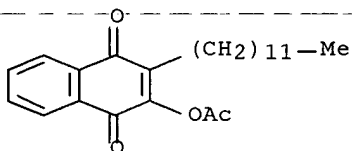
CM 1

CRN 148477-71-8  
CMF C21 H24 Cl2 O4



CM 2

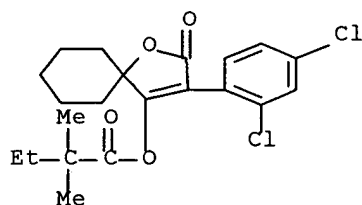
CRN 57960-19-7  
CMF C24 H32 O4



RN 263895-49-4 CAPLUS  
 CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 4-bromo-2-(4-chlorophenyl)-1-(ethoxymethyl)-5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile (9CI) (CA INDEX NAME)

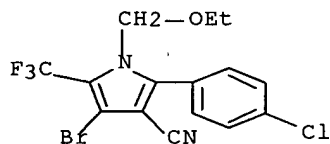
CM 1

CRN 148477-71-8  
 CMF C21 H24 Cl2 O4



CM 2

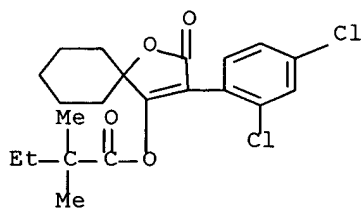
CRN 122453-73-0  
 CMF C15 H11 Br Cl F3 N2 O



RN 263895-50-7 CAPLUS  
 CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with N-[2,6-bis(1-methylethyl)-4-phenoxyphenyl]-N'-(1,1-dimethylethyl)thiourea (9CI) (CA INDEX NAME)

CM 1

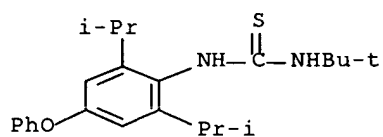
CRN 148477-71-8  
 CMF C21 H24 Cl2 O4



CM 2

CRN 80060-09-9

CMF C23 H32 N2 O S



RN 263895-51-8 CAPLUS

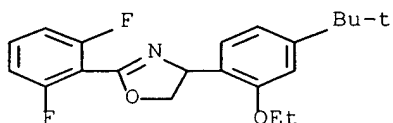
CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 2-(2,6-difluorophenyl)-4-[4-

(1,1-dimethylethyl)-2-ethoxyphenyl]-4,5-dihydrooxazole (9CI) (CA INDEX NAME)

CM 1

CRN 153233-91-1

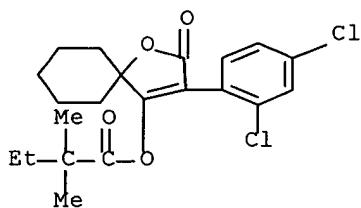
CMF C21 H23 F2 N O2



CM 2

CRN 148477-71-8

CMF C21 H24 Cl2 O4



RN 263895-52-9 CAPLUS

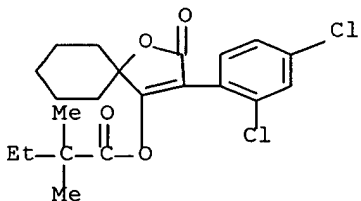
CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 1-(tricyclohexylstannyl)-1H-

1,2,4-triazole (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

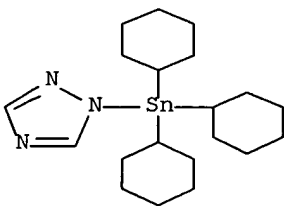
CMF C21 H24 Cl2 O4



CM 2

CRN 41083-11-8

CMF C20 H35 N3 Sn



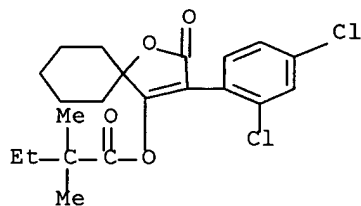
RN 263895-53-0 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with tricyclohexylhydroxystannane (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

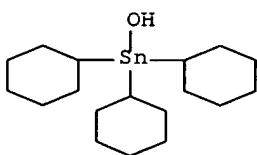
CMF C21 H24 Cl2 O4



CM 2

CRN 13121-70-5

CMF C18 H34 O Sn



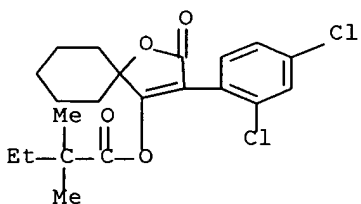
RN 263895-54-1 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 4-chloro-N-[[4-(1,1-dimethylethyl)phenyl]methyl]-3-ethyl-1-methyl-1H-pyrazole-5-carboxamide (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

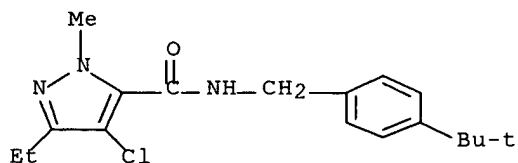
CMF C21 H24 Cl2 O4



CM 2

CRN 119168-77-3

CMF C18 H24 Cl N3 O



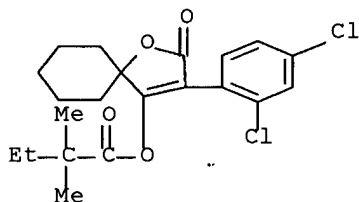
RN 263895-55-2 CAPLUS

CN Benzoic acid, 4-[[[(E)-[1,3-dimethyl-5-phenoxy-1H-pyrazol-4-yl)methylene]amino]oxy]methyl]-, 1,1-dimethylethyl ester, mixt. with 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2,2-dimethylbutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

CMF C21 H24 Cl2 O4

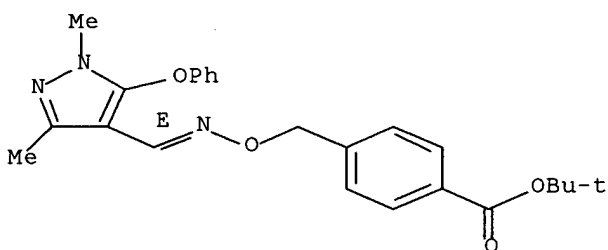


CM 2

CRN 134098-61-6

CMF C24 H27 N3 O4

Double bond geometry as shown.

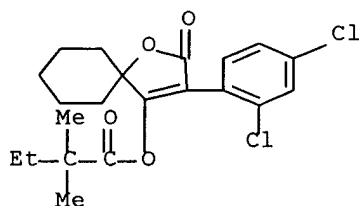


RN 263895-56-3 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 4-chloro-2-(1,1-dimethylethyl)-5-[[[4-(1,1-dimethylethyl)phenyl]methyl]thio]-3(2H)-pyridazinone (9CI) (CA INDEX NAME)

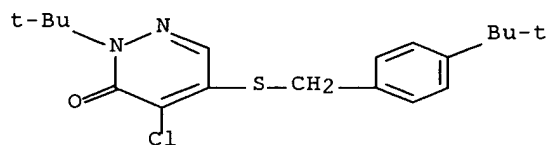
CM 1

CRN 148477-71-8  
CMF C21 H24 Cl2 O4



CM 2

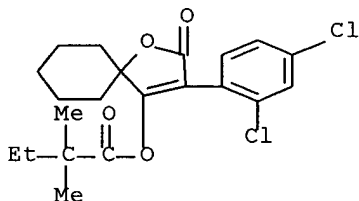
CRN 96489-71-3  
CMF C19 H25 Cl N2 O S



RN 263895-57-4 CAPLUS  
CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with N-[[[4-[2-chloro-4-(trifluoromethyl)phenoxy]-2-fluorophenyl]amino]carbonyl]-2,6-difluorobenzamide (9CI) (CA INDEX NAME)

CM 1

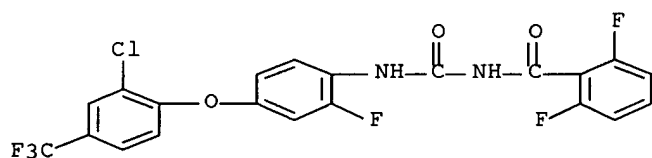
CRN 148477-71-8  
CMF C21 H24 Cl2 O4



CM 2

CRN 101463-69-8  
CMF C21 H11 Cl F6 N2 O3





RN 263895-58-5 CAPLUS

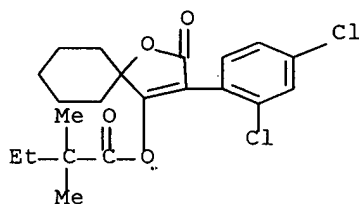
CN Cyclopropanecarboxylic acid, 3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propenyl]-

2,2-dimethyl-, (2-methyl[1,1'-biphenyl]-3-yl)methyl ester, (1R,3R)-rel-,  
mixt. with 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl  
2,2-dimethylbutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

CMF C21 H24 Cl2 O4

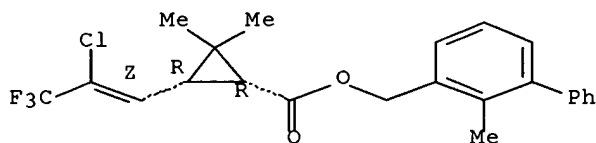


CM 2

CRN 82657-04-3

CMF C23 H22 Cl F3 O2

Relative stereochemistry.  
Double bond geometry as shown.



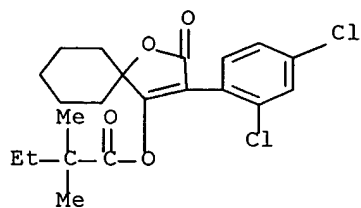
RN 263895-59-6 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 3,6-bis(2-chlorophenyl)-1,2,4,5-tetrazine (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

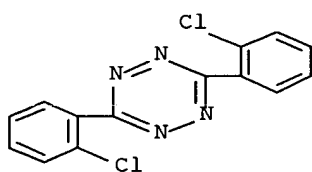
CMF C21 H24 Cl2 O4



CM 2

CRN 74115-24-5

CMF C14 H8 Cl2 N4



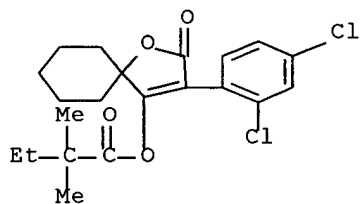
RN 263895-60-9 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with hexakis(2-methyl-2-phenylpropyl)distannoxane (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

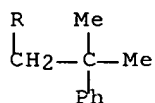
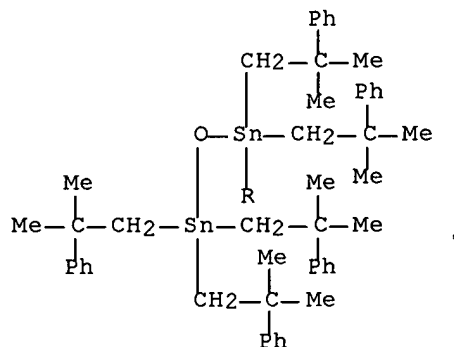
CMF C21 H24 Cl2 O4



CM 2

CRN 13356-08-6

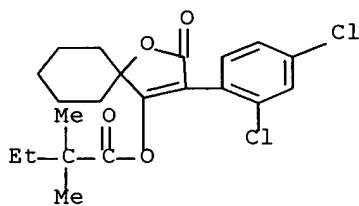
CMF C60 H78 O Sn2



RN 263895-61-0 CAPLUS  
 CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 1,1-dichloro-N-[(dimethylamino)sulfonyl]-1-fluoro-N-(4-methylphenyl)methanesulfenamide (9CI) (CA INDEX NAME)

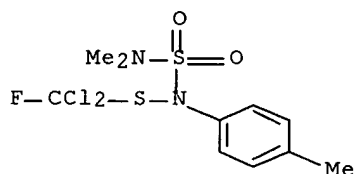
CM 1

CRN 148477-71-8  
 CMF C21 H24 Cl2 O4



CM 2

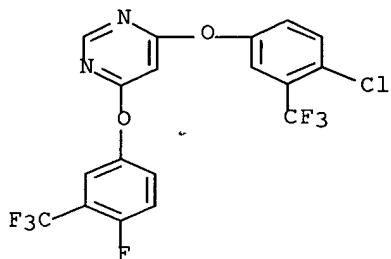
CRN 731-27-1  
 CMF C10 H13 Cl2 F N2 O2 S2



RN 263895-62-1 CAPLUS  
 CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 4-[4-chloro-3-(trifluoromethyl)phenoxy]-6-[4-fluoro-3-(trifluoromethyl)phenoxy]pyrimidine (9CI) (CA INDEX NAME)

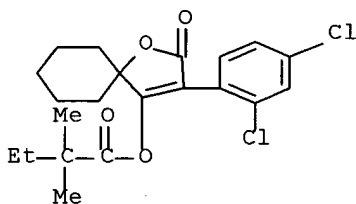
CM 1

CRN 156592-31-3  
 CMF C18 H8 Cl F7 N2 O2



CM 2

CRN 148477-71-8  
 CMF C21 H24 Cl2 O4



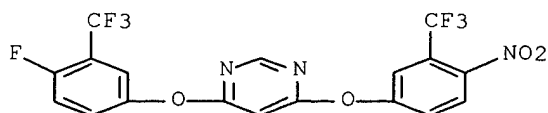
RN 263895-63-2 CAPLUS

-----CN----- Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 4-[4-fluoro-3-(trifluoromethyl)phenoxy]-6-[4-nitro-3-(trifluoromethyl)phenoxy]pyrimidine (9CI) (CA INDEX NAME)

CM 1

CRN 217631-51-1

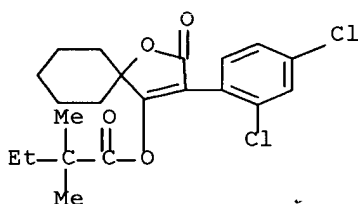
CMF C18 H8 F7 N3 O4



CM 2

CRN 148477-71-8

CMF C21 H24 Cl2 O4



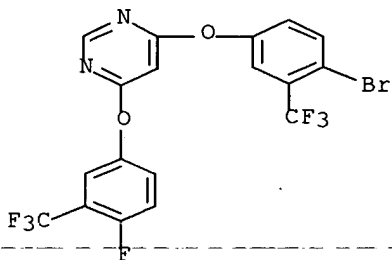
RN 263895-64-3 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with 4-[4-bromo-3-(trifluoromethyl)phenoxy]-6-[4-fluoro-3-(trifluoromethyl)phenoxy]pyrimidine (9CI) (CA INDEX NAME)

CM 1

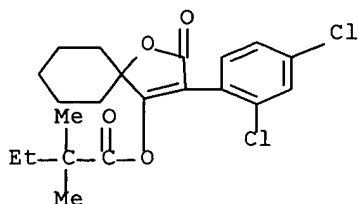
CRN 156592-40-4

CMF C18 H8 Br F7 N2 O2



CM 2

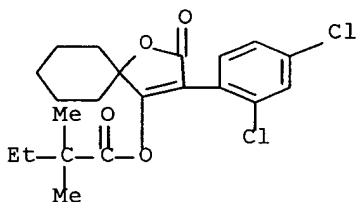
CRN 148477-71-8  
CMF C21 H24 Cl2 O4



RN 263895-65-4 CAPLUS  
CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with  
(2R,3aS,5aR,5bS,9S,13S,14R,16aS,16bR)-2-[(6-deoxy-2,3,4-tri-O-methyl-.alpha.-L-mannopyranosyl)oxy]-13-[[[(2R,5S,6R)-5-(dimethylamino)tetrahydro-6-methyl-2H-pyran-2-yl]oxy]-9-ethyl-2,3,3a,5a,5b,6,9,10,11,12,13,14,16a,16b-tetradecahydro-14-methyl-1H-as-indaceno[3,2-d]oxacyclododecin-7,15-dione (9CI) (CA INDEX NAME)

CM 1

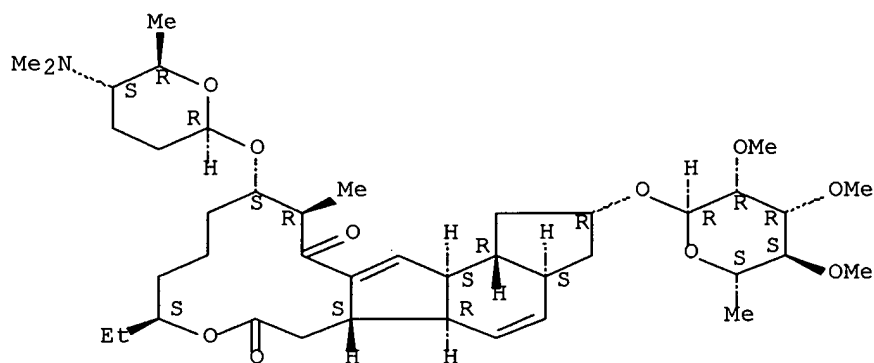
CRN 148477-71-8  
CMF C21 H24 Cl2 O4



CM 2

CRN 131929-60-7  
CMF C41 H65 N O10

Absolute stereochemistry. Rotation (-).



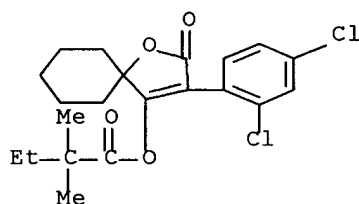
RN 263895-66-5 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester, mixt. with (2R,3aS,5aR,5bS,9S,13S,14R,16aS,16bR)-2-[(6-deoxy-2,3,4-tri-O-methyl-.alpha.-L-mannopyranosyl)oxy]-9-ethyl-2,3,3a,5a,5b,6,9,10,11,12,13,14,16a,16b-tetradecahydro-14-methyl-13-[[[(2R,5S,6R)-tetrahydro-6-methyl-5-(methylamino)-2H-pyran-2-yl]oxy]-1H-as-indaceno[3,2-d]oxacyclododecin-7,15-dione (9CI) (CA INDEX NAME)

CM 1

CRN 148477-71-8

CMF C21 H24 C12 O4

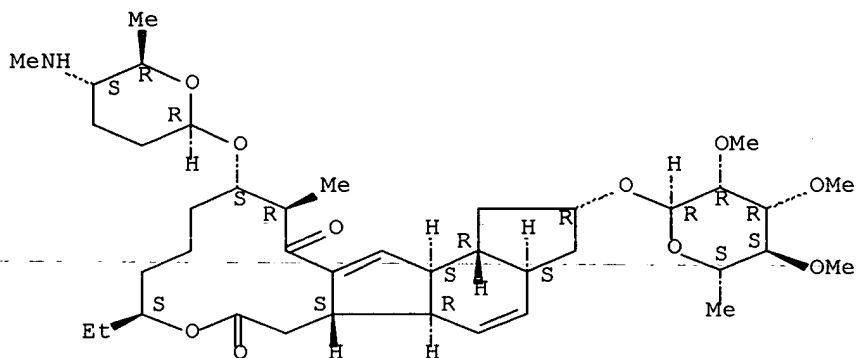


CM 2

CRN 131929-61-8

CMF C40 H63 N O10

Absolute stereochemistry.



RN 264189-82-4 CAPLUS

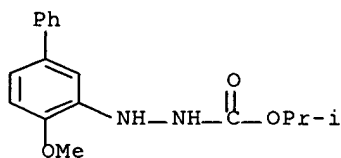
CN Hydrazinecarboxylic acid, 2-(4-methoxy[1,1'-biphenyl]-3-yl)-,

1-methylethyl ester, mixt. with 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2,2-dimethylbutanoate (9CI) (CA INDEX NAME)

CM 1

CRN 149877-41-8

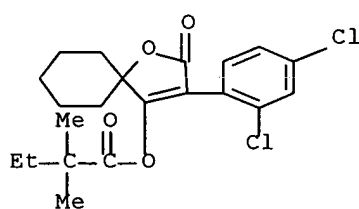
CMF C17 H20 N2 O3



CM 2

CRN 148477-71-8

CMF C21 H24 Cl2 O4

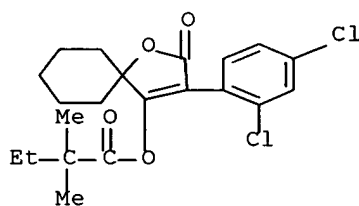


IT 148477-71-8D, mixts. contg.

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(synergistic insecticidal and acaricidal compns.)

RN 148477-71-8 CAPLUS

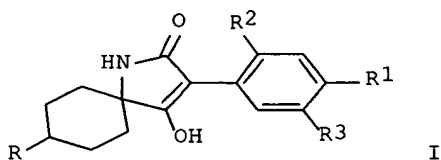
CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





L6 ANSWER 12 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1999:708738 CAPLUS  
 DN 131:310546  
 TI Arylphenyl-substituted cyclic keto enols as insecticides and acaricides  
 IN Lieb, Folker; Fischer, Reiner; Graff, Alan; Schneider, Udo;  
 Bretschneider,  
 Thomas; Erdelen, Christoph; Andersch, Wolfram; Drewes, Mark Wilhelm;  
 Dollinger, Markus; Wetcholowsky, Ingo; Feucht, Dieter; Pontzen, Rolf;  
 Myers, Randy Allen  
 PA Bayer A.-G., Germany  
 SO PCT Int. Appl., 245 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9955673	A1	19991104	WO 1999-EP2488	19990414
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	DE 19818732	A1	19991028	DE 1998-19818732	19980427
	AU 9934215	A1	19991116	AU 1999-34215	19990414
	BR 9910034	A	20001226	BR 1999-10034	19990414
	EP 1075465	A1	20010214	EP 1999-915759	19990414
	R: FR				
	JP 2002513002	T2	20020508	JP 2000-545833	19990414
	US 6451843	B1	20020917	US 2001-673907	20010102
PRAI	DE 1998-19818732	A	19980427		
	WO 1999-EP2488	W	19990414		
OS	MARPAT 131:310546				
GI					



AB Title compds. were prepd. for use as insecticides and acaricides. Thus, pyrrolinone I [R = Me, R1 = 4-ClC6H4, R2 = Me, R3 = Cl] was prepd. by treating I [R1 = Br] with 4-ClC6H4B(OH)2. I [R = OEt, R1 = 4-ClC6H4, R2 = Cl, R3 = Me] at 1% gave 90% kill of Phaeton cochleariae and at 0.1% gave 95% kill of Tetranychus urticae.

IT 247902-12-1P 247902-13-2P

RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL

(Biological

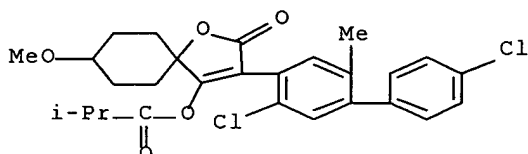
study); PREP (Preparation); USES (Uses)

(prepn. of biphenylpyrrolinones as insecticides and acaricides)

RN 247902-12-1 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(4',5-dichloro-2-methyl[1,1'-biphenyl]-4-yl)-

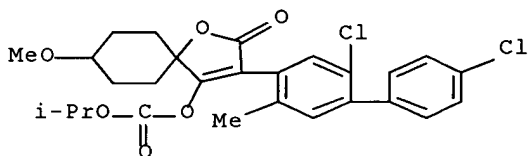
8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 247902-13-2 CAPLUS

CN Carbonic acid, 3-(2,4'-dichloro-5-methyl[1,1'-biphenyl]-4-yl)-8-methoxy-2-

oxo-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



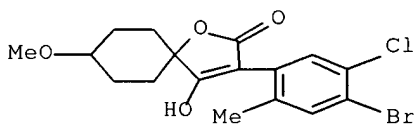
IT 186647-72-3 186647-74-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of biphenylpyrrolinones as insecticides and acaricides)

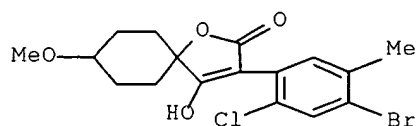
RN 186647-72-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-5-chloro-2-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



RN 186647-74-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-chloro-5-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



IT 247902-10-9P 247902-11-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

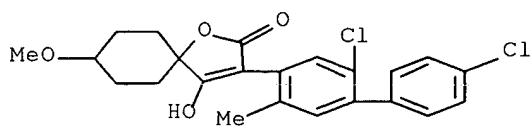
RACT

(Reactant or reagent)

(prepn. of biphenylpyrrolinones as insecticides and acaricides)

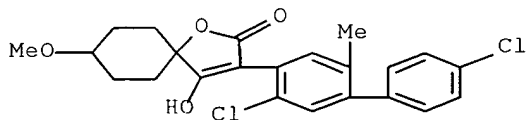
RN 247902-10-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4'-dichloro-5-methyl[1,1'-biphenyl]-4-yl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



RN 247902-11-0 CAPLUS

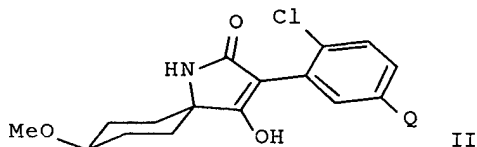
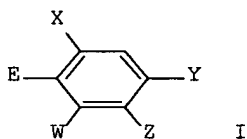
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4',5-dichloro-2-methyl[1,1'-biphenyl]-4-yl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1999:626173 CAPLUS  
 DN 131:243180  
 TI Preparation of arylketoenols as pesticides and herbicides.  
 IN Lieb, Folker; Fischer, Reiner; Graff, Alan; Schneider, Udo;  
 Bretschneider,  
 Thomas; Erdelen, Christoph; Andersch, Wolfram; Drewes, Mark Wilhelm;  
 Dollinger, Markus; Wetcholowsky, Ingo; Myers, Randy Allen  
 PA Bayer Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 267 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948869	A1	19990930	WO 1999-EP1787	19990318
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	DE 19813354	A1	19990930	DE 1998-19813354	19980326
	CA 2325526	AA	19990930	CA 1999-2325526	19990318
	AU 9934147	A1	19991018	AU 1999-34147	19990318
	AU 751256	B2	20020808		
	BR 9909143	A	20001205	BR 1999-9143	19990318
	EP 1066258	A1	20010110	EP 1999-915653	19990318
	R:	AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL			
	JP 2002507599	T2	20020312	JP 2000-537852	19990318
	US 6458965	B1	20021001	US 2001-646722	20010102
	US 2003073851	A1	20030417	US 2002-142325	20020509
PRAI	DE 1998-19813354	A	19980326		
	WO 1999-EP1787	W	19990318		
	US 2001-646722	A3	20010102		
OS	MARPAT 131:243180				
GI					



AB Title compds. [I; X = halo, alkyl, alkoxy, alkenyloxy, alkylthio, alkylsulfinyl, alkylsulfonyl, haloalkyl, haloalkoxy, haloalkenyloxy, NO2,

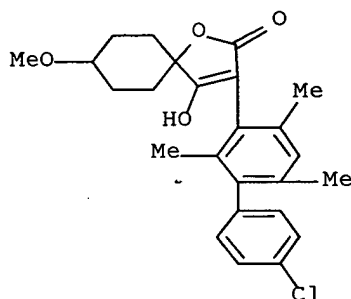
cyano, (substituted) Ph, PhO, PhS, phenylalkoxy, phenylalkylthio; Z = (substituted) cycloalkyl, aryl, heteroaryl; W, Z = H, halo, alkyl, alkoxy, alkenyloxy, haloalkyl, haloalkoxy, haloalkenyloxy, NO<sub>2</sub>, cyano; E = specified (substituted) dioxopyrrolyl, dioxofuryl, dioxothienyl, dioxopyrazolyl, dioxopyranyl, dioxocyclopentyl, etc., residues], were prepd. Thus, II (Q = Br) was stirred with 4-trifluoromethoxyphenylboronic acid, Pd(PPh<sub>3</sub>)<sub>4</sub>, and Na<sub>2</sub>CO<sub>3</sub> in dimethoxyethane/H<sub>2</sub>O at 80.degree. to give II (Q = 4-C<sub>6</sub>H<sub>4</sub>OCF<sub>3</sub>). I at 0.1% gave 95-100% kill of Myzus persicae on cabbage leaves.

IT 244159-16-8P 244159-17-9P 244159-18-0P  
244159-19-1P 244159-20-4P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of arylketoenols as pesticides and herbicides)

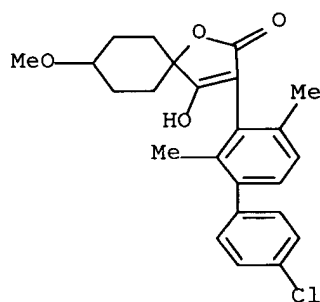
RN 244159-16-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4'-chloro-2,4,6-trimethyl[1,1'-biphenyl]-3-yl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



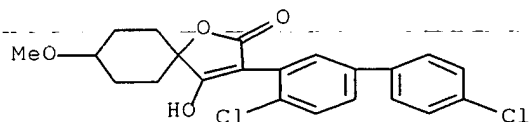
RN 244159-17-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4'-chloro-2,4-dimethyl[1,1'-biphenyl]-3-yl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



RN 244159-18-0 CAPLUS

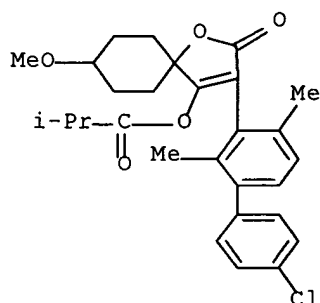
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4,4'-dichloro[1,1'-biphenyl]-3-yl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



RN 244159-19-1 CAPLUS

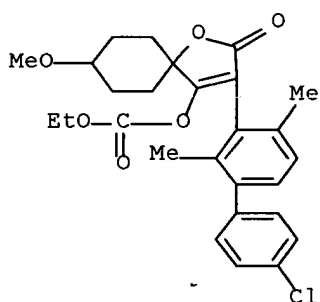
CN Propanoic acid, 2-methyl-, 3-(4'-chloro-2,4-dimethyl[1,1'-biphenyl]-3-

yl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 244159-20-4 CAPLUS

CN Carbonic acid, 3-(4'-chloro-2,4-dimethyl[1,1'-biphenyl]-3-yl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ethyl ester (9CI) (CA INDEX NAME)

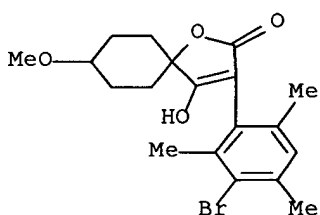


IT 244159-54-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of arylketoenols as pesticides and herbicides)

RN 244159-54-4 CAPLUS

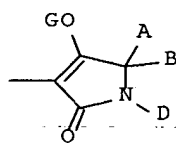
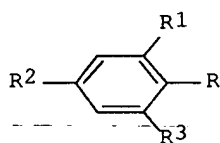
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(3-bromo-2,4,6-trimethylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 14 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1999:566021 CAPLUS  
 DN 131:199616  
 TI Preparation of cyclic ketoenols as herbicides and pesticides  
 IN Lieb, Folker; Fischer, Reiner; Graff, Alan; Schneider, Udo;  
 Bretschneider,  
 Thomas; Erdelen, Christoph; Andersch, Wolfram; Drewes, Mark-Wilhelm;  
 Dollinger, Markus; Wetcholowsky, Ingo; Myers, Randy Allen  
 PA Bayer Aktiengesellschaft, Germany  
 SO PCT Int. Appl., 264 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9943649	A1	19990902	WO 1999-EP1029	19990217
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	DE 19808261	A1	19991028	DE 1998-19808261	19980227
	CA 2322158	AA	19990902	CA 1999-2322158	19990217
	AU 9925231	A1	19990915	AU 1999-25231	19990217
	AU 749786	B2	20020704		
	BR 9909243	A	20001114	BR 1999-9243	19990217
	EP 1056717	A1	20001206	EP 1999-904881	19990217
	R:	AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL			
	JP 2002504538	T2	20020212	JP 2000-533407	19990217
	ZA 9901568	A	19990827	ZA 1999-1568	19990226
	US 6417370	B1	20020709	US 2000-623016	20001023
	US 2002188136	A1	20021212	US 2002-137763	20020502
PRAI	DE 1998-19808261	A	19980227		
	WO 1999-EP1029	W	19990217		
	US 2000-623016	A3	20001023		
OS	MARPAT 131:199616				
GI					



AB Title compds. [I; R = enolic oxo(hetero)cyclic group, e.g.,  
 oxopyrrolinyl

group II; A = H, (halo)alk(en)yl, (hetero)aryl, etc.; B = H or (alkoxy)alkyl; AB = atoms to complete a ring; D = H, alk(en)yl, (hetero)aryl, etc.; AD = atoms to complete a ring; G = H or acyl; R1 = halo, alkyl, alkoxy, phenyl(oxy), etc.; R2 = (un)substituted cycloalkyl or  
- (hetero)aryl; R3 = H, halo, alkyl, alkoxy, etc.] were prepd. Thus, I  
(R  
= group II, A = CHMe2, B = R1 = Me, D = G = H, R2 = Et) (III; R2 = Br)  
was  
condensed with 4-ClC6H4B(OH)2 to give III (R2 = C6H4Cl-4). Data for  
biol.

activity of I were given.

IT 241144-53-6P 241144-55-8P 241144-56-9P  
241144-57-0P 241144-60-5P 241144-61-6P  
241144-62-7P 241144-66-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of cyclic ketoenols as herbicides and pesticides)

RN 241144-53-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4'-chloro-3,5-dimethyl[1,1'-biphenyl]-  
4-yl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

RN 241144-55-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(3,4'-dichloro[1,1'-biphenyl]-4-yl)-4-  
hydroxy-8-methoxy- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

RN 241144-56-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(3,4'-dichloro-5-methyl[1,1'-biphenyl]-  
4-yl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

RN 241144-57-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4'-chloro-3-ethyl-5-methyl[1,1'-  
biphenyl]-4-yl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

RN 241144-60-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4'-chloro-3,5-dimethyl[1,1'-biphenyl]-  
4-yl)-4-hydroxy- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

RN 241144-61-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4'-chloro-3,5-dimethyl[1,1'-biphenyl]-  
4-yl)-4-hydroxy-7-methyl- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

RN 241144-62-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4'-chloro-3,5-dimethyl[1,1'-biphenyl]-  
4-yl)-4-hydroxy-8-methyl- (9CI) (CA INDEX NAME)



\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

RN 241144-66-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4'-chloro-3,5-dimethyl[1,1'-biphenyl]-  
4-yl)-8-ethoxy-4-hydroxy- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

IT 241145-39-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of cyclic ketoenols as herbicides and pesticides)

RN 241145-39-1 CAPLUS

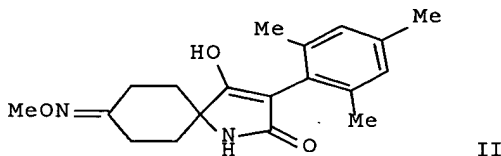
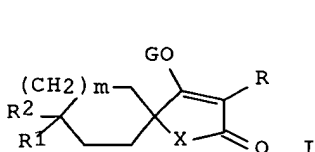
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2,6-dimethylphenyl)-4-hydroxy-  
8-methoxy- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 15 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1999:228062 CAPLUS  
 DN 130:252239  
 TI Spirocyclic phenyl keto enols with insecticidal and acaricidal activity  
 IN Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph;  
 Wachendorff-Neumann, Ulrike; Dollinger, Markus; Turberg, Andreas  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 64 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19742492	A1	19990401	DE 1997-19742492	19970926
	WO 9916748	A1	19990408	WO 1998-EP5809	19980912
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9897431	A1	19990423	AU 1998-97431	19980912
	EP 1017674	A1	20000712	EP 1998-951386	19980912
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL				
	BR 9812535	A	20000725	BR 1998-12535	19980912
	JP 2001518464	T2	20011016	JP 2000-513834	19980912
	ZA 9808784	A	19990331	ZA 1998-8784	19980925
PRAI	DE 1997-19742492	A	19970926		
	WO 1998-EP5809	W	19980912		
OS	MARPAT 130:252239				
GI					



AB Keto enols I [X = NH, O, S; R = (un)substituted Ph; G = H, acyl, alkoxy, carbonyl, substituted sulfonyl, phosphoryl, carbamoyl; R1 = OH, R2 = H; R1 = R2 = alkoxy; R1R2 = O, (un)substituted NH, NOH, NNH2; m = 0, 1] were prep'd. for use as insecticides, acaricides, and herbicides. Thus, 4-hydroxycyclohexanone was converted to the O-methyloxime, the hydroxyl group oxidized and the cyclohexanedione mono-O-methyloxime treated with NH4OH and KCN to give 4-amino-4-cyanocyclohexanone O-methyloxime. This latter comp'd. was treated with 2,4,6-Me3C6H2CH2COCl, the cyano group hydrolyzed, and cyclized to give the lactam II. At 0.1% II gave 100% control of Myzus persicae on cabbage.

IT 221526-93-8P 221526-96-1P 221526-97-2P

**221526-98-3P 221526-99-4P 221527-00-0P**

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation);

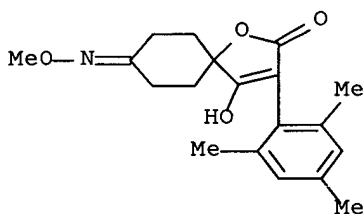
RACT

(Reactant or reagent); USES (Uses)

(prepn. of spirocyclic Ph keto enols with insecticidal and acaricidal activity)

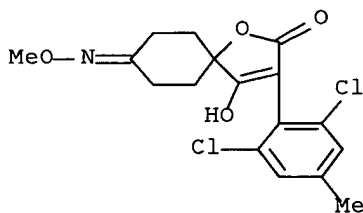
RN 221526-93-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 4-hydroxy-3-(2,4,6-trimethylphenyl)-  
,  
8-(O-methyloxime) (9CI) (CA INDEX NAME)



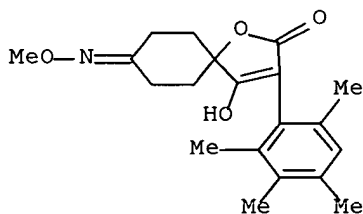
RN 221526-96-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 3-(2,6-dichloro-4-methylphenyl)-4-  
hydroxy-, 8-(O-methyloxime) (9CI) (CA INDEX NAME)



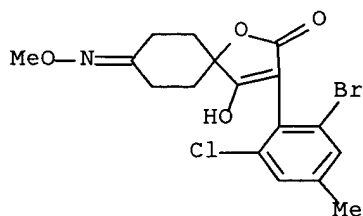
RN 221526-97-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 4-hydroxy-3-(2,3,4,6-  
tetramethylphenyl)-, 8-(O-methyloxime) (9CI) (CA INDEX NAME)



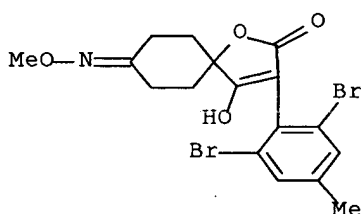
RN 221526-98-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 3-(2-bromo-6-chloro-4-methylphenyl)-  
4-  
hydroxy-, 8-(O-methyloxime) (9CI) (CA INDEX NAME)



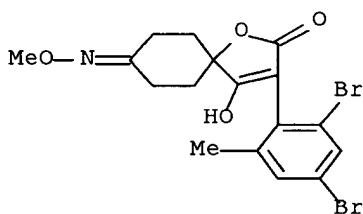
RN 221526-99-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 3-(2,6-dibromo-4-methylphenyl)-4-hydroxy-, 8-(O-methyloxime) (9CI) (CA INDEX NAME)



RN 221527-00-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 3-(2,4-dibromo-6-methylphenyl)-4-hydroxy-, 8-(O-methyloxime) (9CI) (CA INDEX NAME)

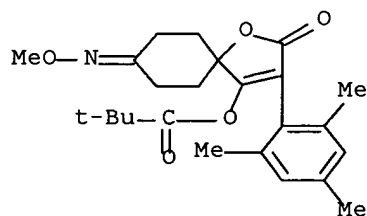


IT 221527-03-3P 221527-04-4P 221527-05-5P  
221527-06-6P 221527-08-8P 221527-09-9P  
221527-10-2P 221527-11-3P 221527-12-4P  
221527-13-5P 221527-18-0P 221527-19-1P  
221527-20-4P 221527-21-5P 221527-22-6P  
221527-23-7P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of spirocyclic Ph keto enols with insecticidal and acaricidal activity)-

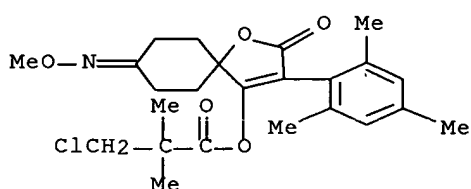
RN 221527-03-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-(methoxyimino)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



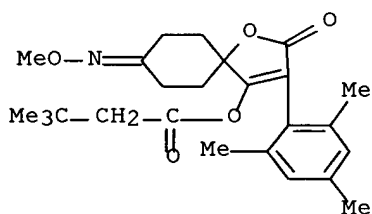
RN 221527-04-4 CAPLUS

CN Propanoic acid, 3-chloro-2,2-dimethyl-, 8-(methoxyimino)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



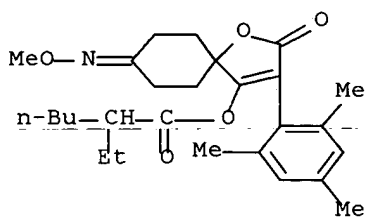
RN 221527-05-5 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 8-(methoxyimino)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



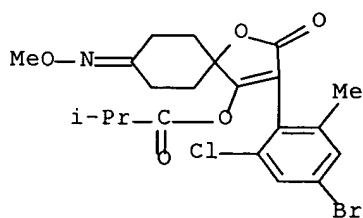
RN 221527-06-6 CAPLUS

CN Hexanoic acid, 2-ethyl-, 8-(methoxyimino)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



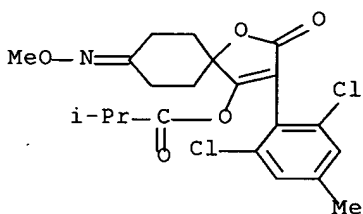
RN 221527-08-8 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(4-bromo-2-chloro-6-methylphenyl)-8-(methoxyimino)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



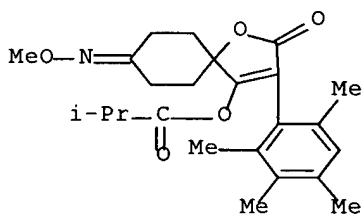
RN 221527-09-9 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,6-dichloro-4-methylphenyl)-8-(methoxyimino)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



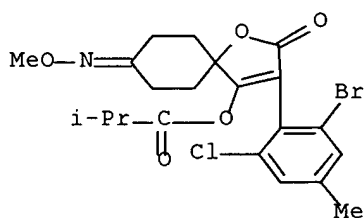
RN 221527-10-2 CAPLUS

CN Propanoic acid, 2-methyl-, 8-(methoxyimino)-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 221527-11-3 CAPLUS

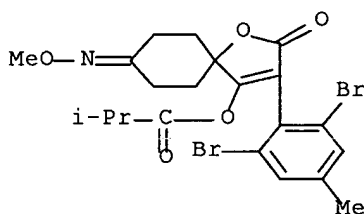
CN Propanoic acid, 2-methyl-, 3-(2-bromo-6-chloro-4-methylphenyl)-8-(methoxyimino)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 221527-12-4 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,6-dibromo-4-methylphenyl)-8-(methoxyimino)-

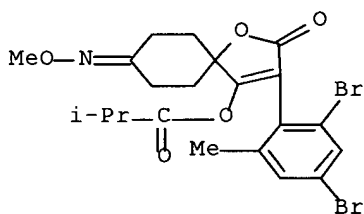
2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 221527-13-5 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,4-dibromo-6-methylphenyl)-8-(methoxyimino)-

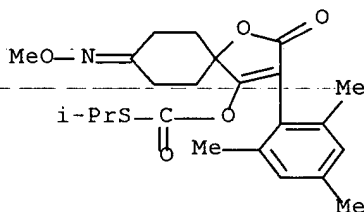
2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 221527-18-0 CAPLUS

CN Carbonothioic acid, O-[8-(methoxyimino)-2-oxo-3-(2,4,6-trimethylphenyl)-1-

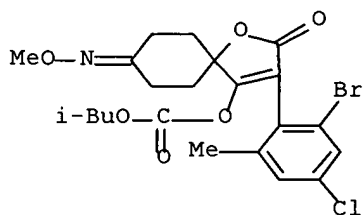
oxaspiro[4.5]dec-3-en-4-yl] S-(1-methylethyl) ester (9CI) (CA INDEX NAME)



RN 221527-19-1 CAPLUS

CN Carbonic acid, 3-(2-bromo-4-chloro-6-methylphenyl)-8-(methoxyimino)-2-oxo-

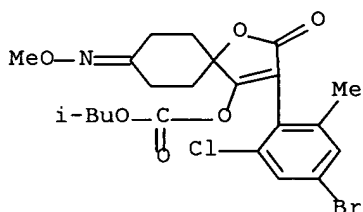
1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



RN 221527-20-4 CAPLUS

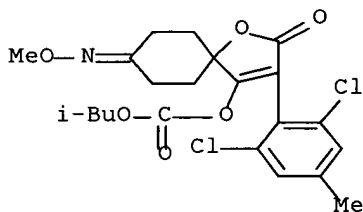
CN Carbonic acid, 3-(4-bromo-2-chloro-6-methylphenyl)-8-(methoxyimino)-2-oxo-

1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



RN 221527-21-5 CAPLUS

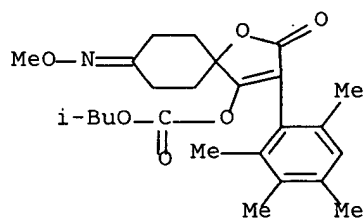
CN Carbonic acid, 3-(2,6-dichloro-4-methylphenyl)-8-(methoxyimino)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



RN 221527-22-6 CAPLUS

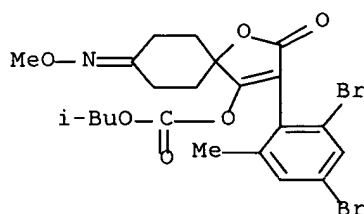
CN Carbonic acid, 8-(methoxyimino)-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)





RN 221527-23-7 CAPLUS

CN Carbonic acid, 3-(2,4-dibromo-6-methylphenyl)-8-(methoxyimino)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



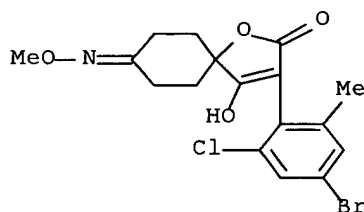
IT 221526-95-0P 221527-01-1P

RL: AGR (Agricultural use); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of spirocyclic Ph keto enols with insecticidal and acaricidal activity)

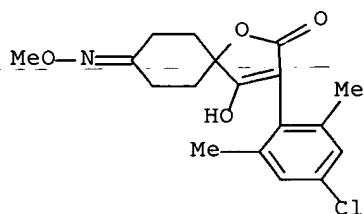
RN 221526-95-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 3-(4-bromo-2-chloro-6-methylphenyl)-4-hydroxy-, 8-(O-methyloxime) (9CI) (CA INDEX NAME)



RN 221527-01-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 3-(4-chloro-2,6-dimethylphenyl)-4-hydroxy-, 8-(O-methyloxime) (9CI) (CA INDEX NAME)

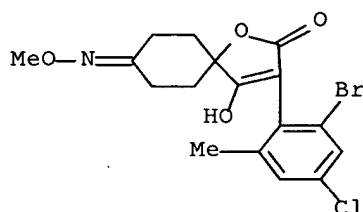


IT 221526-94-9P 221527-07-7P 221527-14-6P  
221527-15-7P 221527-16-8P 221527-24-8P  
221527-25-9P

RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL  
(Biological study); PREP (Preparation); USES (Uses)  
(prepn. of spirocyclic Ph keto enols with insecticidal and acaricidal activity)

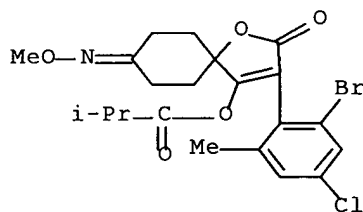
RN 221526-94-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 3-(2-bromo-4-chloro-6-methylphenyl)-  
4-hydroxy-, 8-(O-methyloxime) (9CI) (CA INDEX NAME)



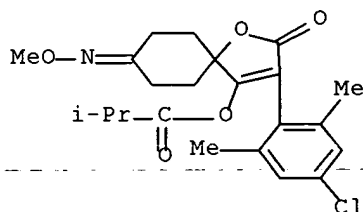
RN 221527-07-7 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-8-(methoxyimino)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 221527-14-6 CAPLUS

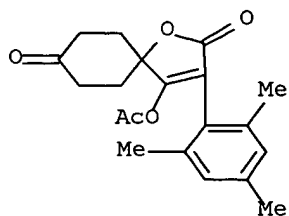
CN Propanoic acid, 2-methyl-, 3-(4-chloro-2,6-dimethylphenyl)-8-(methoxyimino)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 221527-15-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 4-(acetyloxy)-3-(2,4,6-

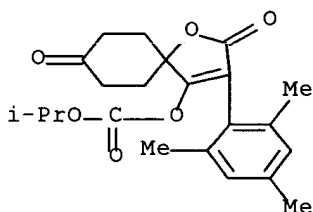
trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 221527-16-8 CAPLUS

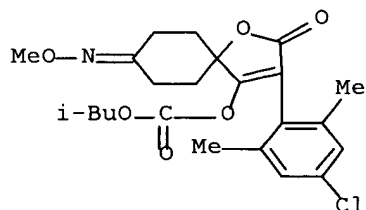
CN Carbonic acid, 2,8-dioxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-

4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



RN 221527-24-8 CAPLUS

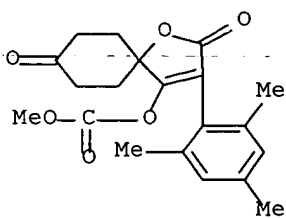
CN Carbonic acid, 3-(4-chloro-2,6-dimethylphenyl)-8-(methoxyimino)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



RN 221527-25-9 CAPLUS

CN Carbonic acid, 2,8-dioxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-

4-yl methyl ester (9CI) (CA INDEX NAME)



IT 221526-92-7P 221527-02-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

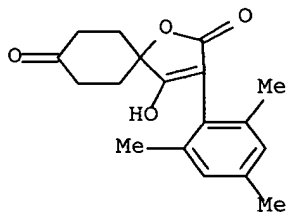
RACT

(Reactant or reagent)

(prepn. of spirocyclic Ph keto enols with insecticidal and acaricidal activity)

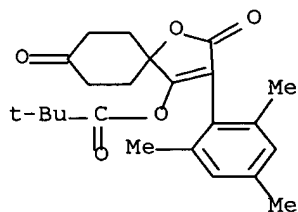
RN 221526-92-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-ene-2,8-dione, 4-hydroxy-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)



RN 221527-02-2 CAPLUS

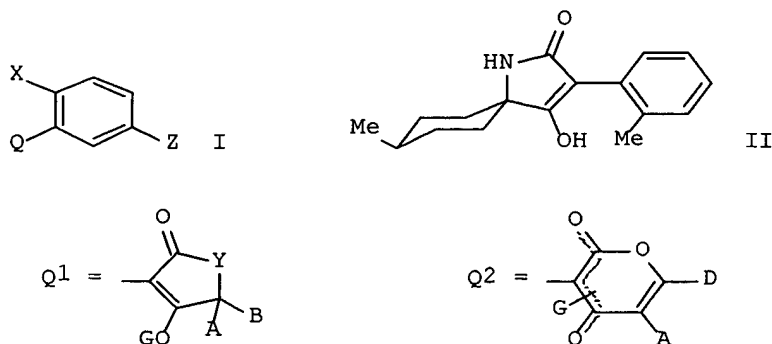
CN Propanoic acid, 2,2-dimethyl-, 2,8-dioxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



L6 ANSWER 16 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1998:112341 CAPLUS  
 DN 128:180328  
 TI Preparation of phenyl-substituted heterocyclic ketoenols as pesticides.  
 IN Lieb, Folker; Fischer, Reiner; Bretschneider, Thomas; Ruther, Michael;  
 Graff, Alan; Schneider, Udo; et al.  
 PA Bayer A.-G., Germany; Lieb, Folker; Fischer, Reiner; Bretschneider,  
 Thomas; Ruther, Michael; Graff, Alan  
 SO PCT Int. Appl., 161 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9805638	A2	19980212	WO 1997-EP3973	19970723
	WO 9805638	A3	19980319		
	W:		AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:		GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
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	AU 9737706	A1	19980225	AU 1997-37706	19970723
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	EP 915846	A2	19990519	EP 1997-934523	19970723
	EP 915846	B1	20030423		
	R:		BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT		
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	US 2002010204	A1	20020124	US 2001-809619	20010315
	US 6359151	B2	20020319		
	US 6504036	B1	20030107	US 2001-6115	20011210
PRAI	DE 1996-19631586	A	19960805		
	DE 1997-19716591	A	19970421		
	EP 1997-934523	A3	19970723		
	WO 1997-EP3973	W	19970723		
	US 1999-230653	A3	19990128		
	US 2000-548129	A3	20000412		

US 2001-809619 A3 20010315  
 OS MARPAT 128:180328  
 GI



AB Title compds. [I; X = halo, alkyl, alkenyl, alkynyl, alkoxy, benzyloxy, haloalkyl, haloalkoxy, cyano, NO<sub>2</sub>; Z = H, amino, halo, alkyl, alkoxy, haloalkyl, haloalkoxy, OH, cyano, NO<sub>2</sub>, (substituted) PhO, PhS, heteroaryloxy, heteroarylthio, phenylalkoxy, phenylalkylthio; Q = Q1,

Q2; Y = NH, O, S; A = (substituted) alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl, (unsatd.) cycloalkyl, heterocyclyl, aryl, aralkyl, heteroaryl; B = alkyl, alkoxyalkyl; AB, AD = atoms to form (unsatd.) (substituted) carbocyclic or heterocyclic rings; D = H, (substituted) alkyl, alkenyl, alkynyl, alkoxyalkyl, alkylthioalkyl, (unsatd.) cycloalkyl, heterocyclyl, aralkyl, aryl, heteroarylalkyl, heteroaryl; G

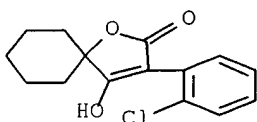
= H, acyl], were prepd. Thus, title compd. (II) (prepn. given) at 0.15 gave 100% kill of *Phaedon cochleariae* larvae on cabbage leaves.

IT 203313-73-9P 203313-74-0P 203313-75-1P  
 203313-76-2P 203313-77-3P 203313-78-4P  
 203313-79-5P 203313-80-8P 203313-81-9P  
 203313-82-0P 203313-83-1P 203313-84-2P  
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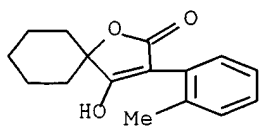
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of phenyl-substituted heterocyclic ketoenols as pesticides)

RN 203313-73-9 CAPLUS

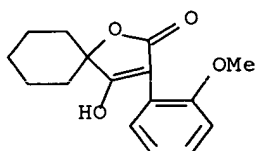
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-chlorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



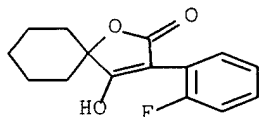
RN 203313-74-0 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2-methylphenyl)- (9CI) (CA  
 INDEX NAME)



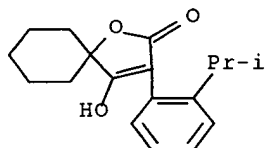
RN 203313-75-1 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2-methoxyphenyl)- (9CI) (CA  
 INDEX NAME)



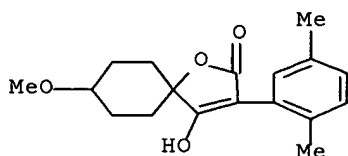
RN 203313-76-2 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-fluorophenyl)-4-hydroxy- (9CI) (CA  
 INDEX NAME)



RN 203313-77-3 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-[2-(1-methylethyl)phenyl]-  
 (9CI) (CA INDEX NAME)

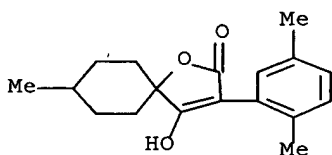


RN 203313-78-4 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,5-dimethylphenyl)-4-hydroxy-8-  
 methoxy-  
 (9CI) (CA INDEX NAME)



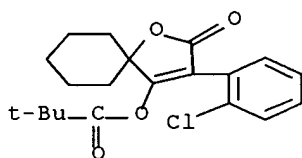
RN 203313-79-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,5-dimethylphenyl)-4-hydroxy-8-methyl-  
(9CI) (CA INDEX NAME)



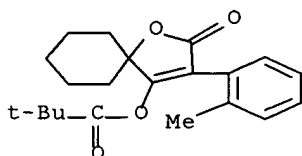
RN 203313-80-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-chlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 203313-81-9 CAPLUS

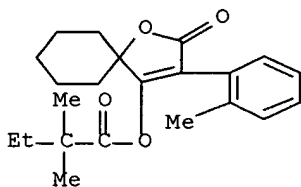
CN Propanoic acid, 2,2-dimethyl-, 3-(2-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 203313-82-0 CAPLUS

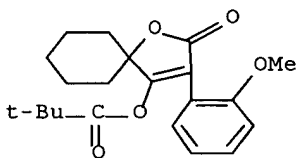
CN Butanoic acid, 2,2-dimethyl-, 3-(2-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





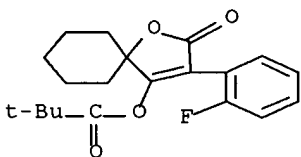
RN 203313-83-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-methoxyphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



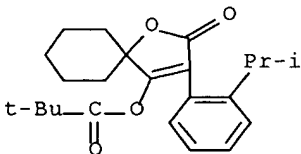
RN 203313-84-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-fluorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



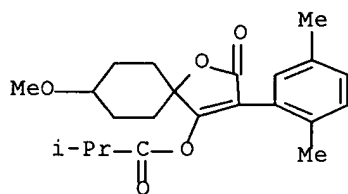
RN 203313-85-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-[2-(1-methylethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



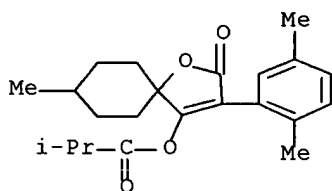
RN 203313-86-4 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



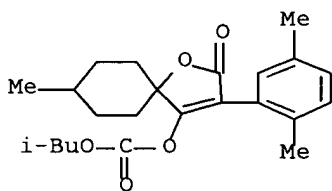
RN 203313-87-5 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,5-dimethylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



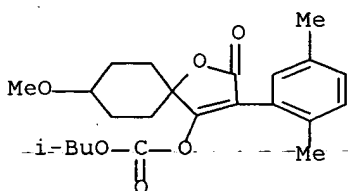
RN 203313-88-6 CAPLUS

CN Carbonic acid, 3-(2,5-dimethylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



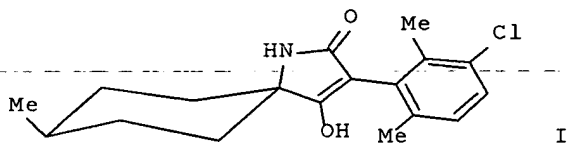
RN 203313-89-7 CAPLUS

CN Carbonic acid, 3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



L6 ANSWER 17 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1997:679056 CAPLUS  
 DN 127:318875  
 TI Arylheterocyclic keto enols as pesticides and herbicides  
 IN Lieb, Volker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Graff, Alan; Schneider, Udo  
 PA Bayer A.-G., Germany; Lieb, Volker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; et al.  
 SO PCT Int. Appl., 192 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9736868	A1	19971009	WO 1997-EP1426	19970321
	W: AU, BB, BG, BR, BY, CA, CN, CZ, HU, IL, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, TR, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	DE 19649665	A1	19971009	DE 1996-19649665	19961129
	CA 2250417	AA	19971009	CA 1997-2250417	19970321
	AU 9722900	A1	19971022	AU 1997-22900	19970321
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	EP 891330	A1	19990120	EP 1997-915409	19970321
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	KR 2000004994	A	20000125	KR 1998-7606	19980925
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	US 6140358	A	20001031	US 1998-155637	19980929
	US 2001004629	A1	20010621	US 2000-550105	20000414
	US 6271190	B2	20010807		
	US 6388123	B1	20020514	US 2001-871611	20010601
	US 6486343	B1	20021126	US 2002-74351	20020212
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	DE 1996-19649665	A	19961129		
	WO 1997-EP1426	W	19970321		
	US 1998-155637	A3	19980929		
	US 2000-550105	A3	20000414		
	US 2001-871611	A3	20010601		
OS	MARPAT 127:318875				
GI					



AB Title compds. were prepd. Thus, 3,2,6-Cl(Me)2C6H2CH2CO2H was treated with

Me cis-1-amino-4-methylcyclohexanecarboxylate and cyclized with base to give the pyrrolinone I. At 0.1% I gave 100% control of Nephotettix cincticeps on rice.

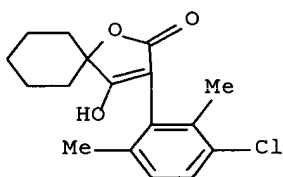
IT 197710-62-6P 197710-64-8P

RL: AGR (Agricultural use); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of arylheterocyclic keto enols as insecticides and acaricides)

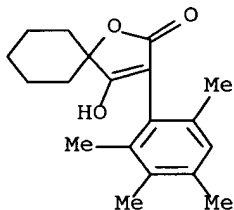
RN 197710-62-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(3-chloro-2,6-dimethylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



RN 197710-64-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,3,4,6-tetramethylphenyl)-  
(9CI) (CA INDEX NAME)

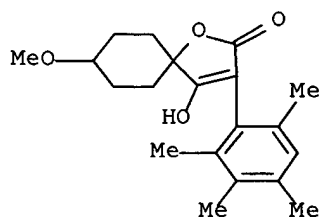


IT 197710-65-9P 197710-66-0P 197710-67-1P  
197710-68-2P 197710-69-3P 197710-70-6P  
197710-71-7P 197710-72-8P 197710-73-9P  
197710-74-0P 197710-75-1P 197710-76-2P  
197710-77-3P

RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of arylheterocyclic keto enols as insecticides and acaricides)

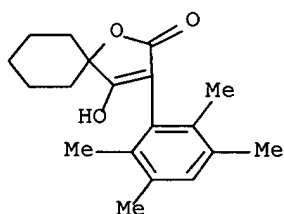
RN 197710-65-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methoxy-3-(2,3,4,6-tetramethylphenyl)- (9CI) (CA INDEX NAME)



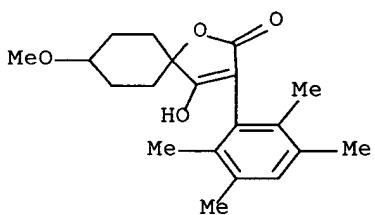
RN 197710-66-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,3,5,6-tetramethylphenyl)-  
(9CI) (CA INDEX NAME)



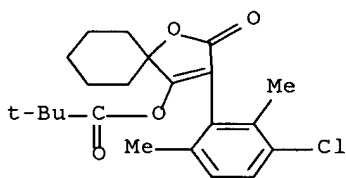
RN 197710-67-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methoxy-3-(2,3,5,6-tetramethylphenyl)- (9CI) (CA INDEX NAME)



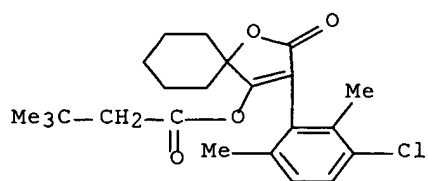
RN 197710-68-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(3-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



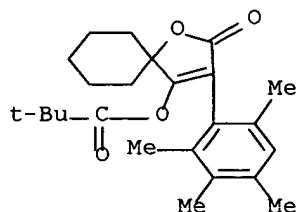
RN 197710-69-3 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(3-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



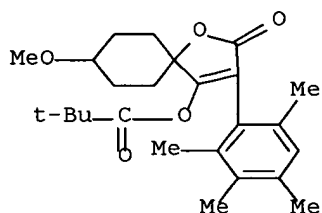
RN 197710-70-6 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



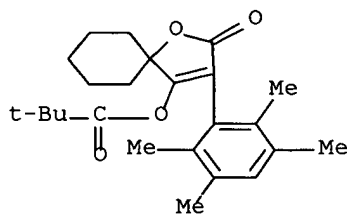
RN 197710-71-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



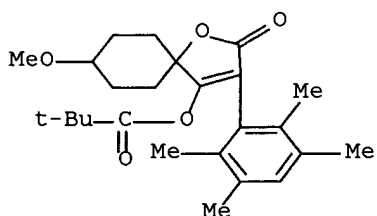
RN 197710-72-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,3,5,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



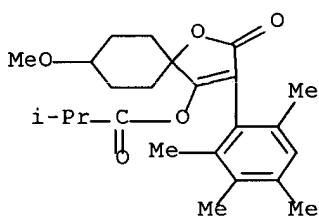
RN 197710-73-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,3,5,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



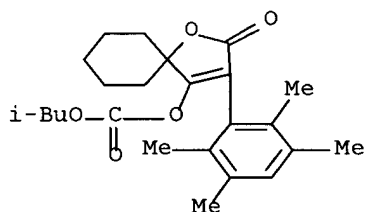
RN 197710-74-0 CAPLUS

CN Propanoic acid, 2-methyl-, 8-methoxy-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



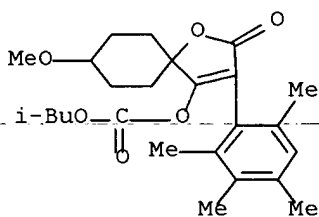
RN 197710-75-1 CAPLUS

CN Carbonic acid, 2-methylpropyl 2-oxo-3-(2,3,5,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



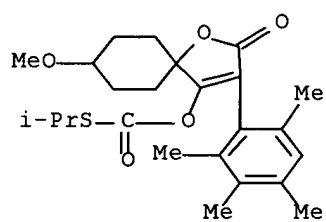
RN 197710-76-2 CAPLUS

CN Carbonic acid, 8-methoxy-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



RN 197710-77-3 CAPLUS

CN Carbonothioic acid, O-[8-methoxy-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] S-(1-methylethyl) ester (9CI) (CA INDEX NAME)





L6 ANSWER 18 OF 24 CAPLUS COPYRIGHT 2003 ACS

AN 1997:151521 CAPLUS

DN 126:157396

TI Preparation of 3-phenylheterocycloalkyl-2,4-dione enols as pesticides  
and

herbicides

IN Lieb, Folker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer,  
Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann,  
Ulrike; Dahmen, Peter; Dollinger, Markus; Santel, Hans-Joachim; Graff,  
Alan; Andersch, Wolfram

PA Bayer A.-G., Germany

SO Ger. Offen., 135 pp.

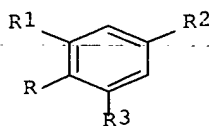
CODEN: GWXXBX

DT Patent

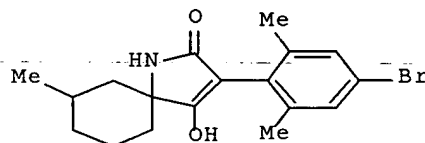
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19603332	A1	19970102	DE 1996-19603332	19960131
	CA 2225830	AA	19970123	CA 1996-2225830	19960617
	WO 9702243	A1	19970123	WO 1996-EP2601	19960617
	W:	AU, BB, BG, BR, BY, CA, CN, CZ, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, TR, UA, US			
	RW:	AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9663561	A1	19970205	AU 1996-63561	19960617
	AU 707357	B2	19990708		
	EP 835243	A1	19980415	EP 1996-922817	19960617
	EP 835243	B1	20030129		
	R:	BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL			
	CN 1193960	A	19980923	CN 1996-196456	19960617
	BR 9609301	A	19990525	BR 1996-9301	19960617
	JP 11510481	T2	19990914	JP 1996-504750	19960617
	TW 410141	B	20001101	TW 1996-85107798	19960628
	US 5994274	A	19991130	US 1997-981610	19971223
	US 6251830	B1	20010626	US 1999-360510	19990726
	US 2002022575	A1	20020221	US 2001-839481	20010420
	US 6469196	B2	20021022		
	CN 1362397	A	20020807	CN 2001-138493	20011114
PRAI	DE 1995-19523850	A1	19950630		
	DE 1996-19603332	A	19960131		
	WO 1996-EP2601	W	19960617		
	US 1997-981610	A3	19971223		
	US 1999-360510	A3	19990726		
OS	MARPAT 126:157396				
GI					



I



II

AB Title compds. [I; R = 4-(O-acyl)hydroxy-2-oxo-3-pyrrolin-2-yl, -2,5-dihydro-3-furyl, -2,5-dihydro-3-thienyl, etc.; R1 = alkyl; R2,R3 = halo or alkyl] were prepd. Thus, 4,2,6-BrMe2C6H2CH2CO2H was amidated by Me 1-amino-3-methylcyclohexanecarboxylate and the product cyclized to give

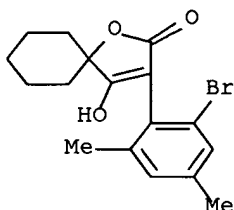
title compd. II. Data for biol. activity of I were given.

IT 186747-50-2P 186747-51-3P 186747-52-4P  
186747-55-7P 186747-58-0P 186747-63-7P  
186747-64-8P 186747-65-9P 186747-66-0P  
186747-68-2P 186747-69-3P 186747-70-6P  
186747-82-0P 186747-84-2P 186747-91-1P  
186747-92-2P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 3-phenylheterocycloalkyl-2,4-dione enols as pesticides and herbicides)

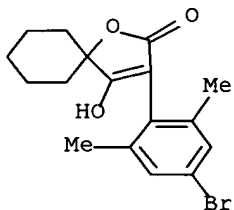
RN 186747-50-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-bromo-4,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



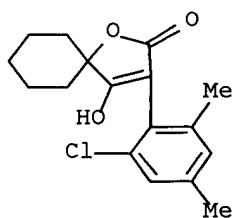
RN 186747-51-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



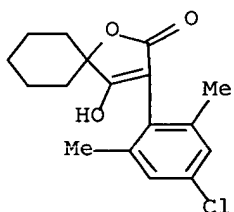
RN 186747-52-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-chloro-4,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



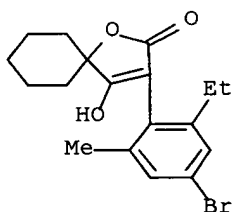
RN 186747-55-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-chloro-2,6-dimethylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



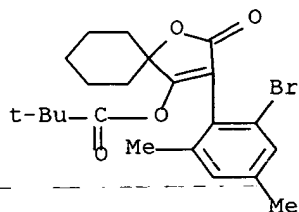
RN 186747-58-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-ethyl-6-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



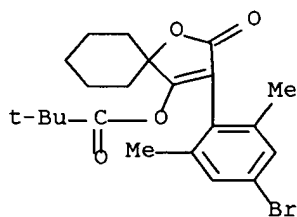
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CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



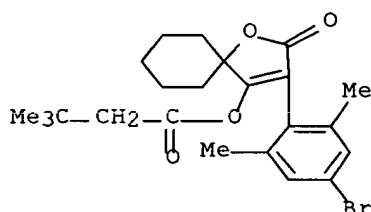
RN 186747-64-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



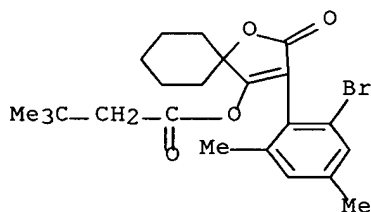
RN 186747-65-9 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



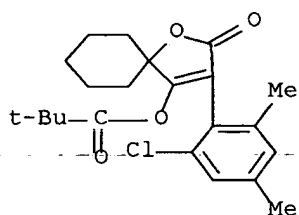
RN 186747-66-0 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 186747-68-2 CAPLUS

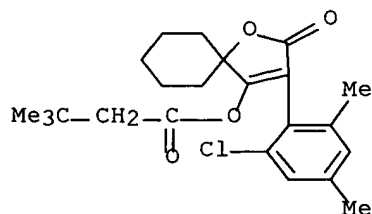
CN Propanoic acid, 2,2-dimethyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 186747-69-3 CAPLUS

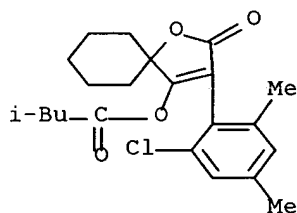
CN Butanoic acid, 3,3-dimethyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-

oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



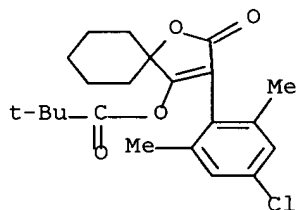
RN 186747-70-6 CAPLUS

CN Butanoic acid, 3-methyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



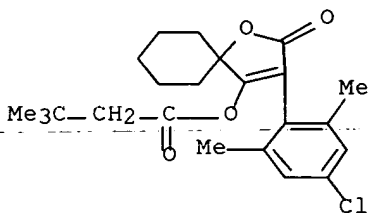
RN 186747-82-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



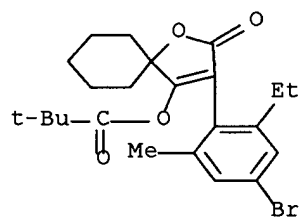
RN 186747-84-2 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

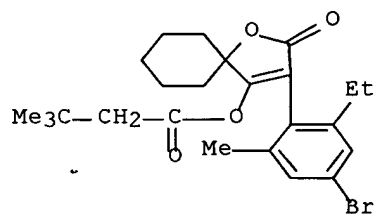


RN 186747-91-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2-ethyl-6-methylphenyl)-2-oxo-  
1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 186747-92-2 CAPLUS  
CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-2-ethyl-6-methylphenyl)-2-oxo-  
1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



L6 ANSWER 19 OF 24 CAPLUS COPYRIGHT 2003 ACS

AN 1997:140239 CAPLUS

DN 126:144113

TI Preparation of 3-phenylheterocycloalkyl-2,4-dione enols as herbicides and

pesticides

IN Lieb, Folker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Santel, Hans-Joachim; Dollinger, Markus; Graff, Alan; Mencke, Norbert; Turberg, Andreas; Dahmen, Peter

PA Bayer A.-G., Germany

SO Ger. Offen., 94 pp.

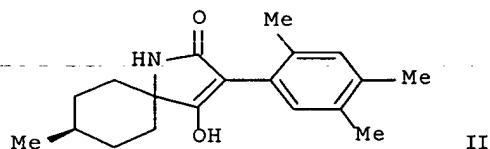
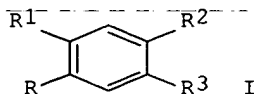
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19602524	A1	19970102	DE 1996-19602524	19960125
	WO 9701535	A1	19970116	WO 1996-EP2606	19960617
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	RW:	AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
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	AU 709848	B2	19990909		
	EP 837847	A1	19980429	EP 1996-922005	19960617
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	R:	BE, CH, DE, ES, FR, GB, GR, IT, LI, NL			
	CN 1198154	A	19981104	CN 1996-196513	19960617
	BR 9609250	A	19990518	BR 1996-9250	19960617
	JP 11508880	T2	19990803	JP 1996-504136	19960617
	RU 2195449	C2	20021227	RU 1998-101701	19960617
	ES 2180786	T3	20030216	ES 1996-922005	19960617
	ZA 9605465	A	19970124	ZA 1996-5465	19960627
	TW 476754	B	20020221	TW 1996-85107720	19960627
	US 6110872	A	20000829	US 1997-983028	19971222
	US 6511942	B1	20030128	US 2000-496616	20000202
PRAI	DE 1995-19523471	A1	19950628		
	DE 1996-19602524	A	19960125		
	WO 1996-EP2606	W	19960617		
	US 1997-983028	A3	19971222		
OS	MARPAT 126:144113				
GI					



AB Title compds. [I; R = 4-(O-acyl)hydroxy-2-oxo-3-pyrrolinyl, 2,5-dihydro-3-furyl, 2,5-dihydro-3-thienyl, etc.; R1 = halo, alkyl, alkoxy, etc.; R2 = H, halo, alkyl, alkoxy, etc.; R3 = halo, alkyl, alkoxy, etc.] were prepd. Thus, 2,4,5-Me3C6H2CH2CO2H (prepn. given) was amidated

by Me cis-1-amino-4-methylcyclohexanecarboxylate and the product cyclized

to give title compd. II. Data for biol. activity of I were given.

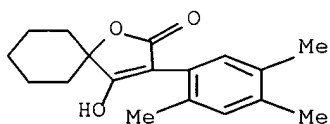
IT 186647-66-5P 186647-67-6P 186647-68-7P  
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 186647-76-7P 186647-77-8P 186647-78-9P  
 186647-79-0P 186647-80-3P 186647-81-4P  
 186647-82-5P 186647-83-6P 186647-85-8P  
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 186647-92-7P 186647-94-9P 186647-96-1P  
 186647-97-2P 186647-98-3P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 3-phenylheterocycloalkyl-2,4-dione enols as herbicides and pesticides)

RN 186647-66-5 CAPLUS

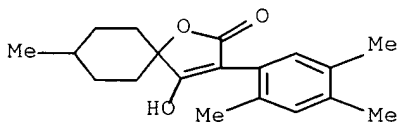
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,5-trimethylphenyl)- (9CI)

(CA INDEX NAME)



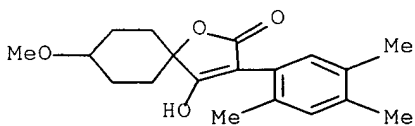
RN 186647-67-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methyl-3-(2,4,5-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 186647-68-7 CAPLUS

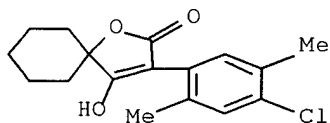
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methoxy-3-(2,4,5-trimethylphenyl)- (9CI) (CA INDEX NAME)





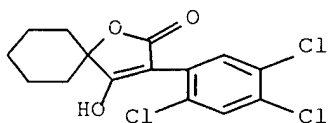
RN 186647-69-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-chloro-2,5-dimethylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



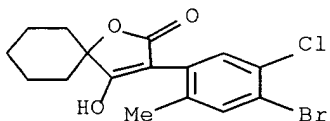
RN 186647-70-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,5-trichlorophenyl)-  
(9CI) (CA INDEX NAME)



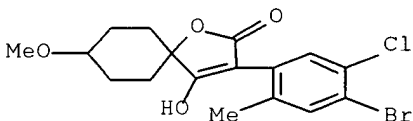
RN 186647-71-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-5-chloro-2-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



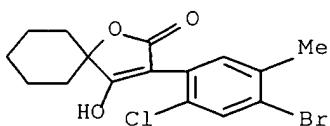
RN 186647-72-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-5-chloro-2-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



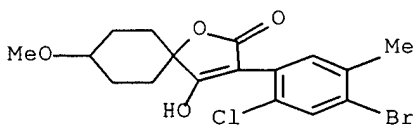
RN 186647-73-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-chloro-5-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



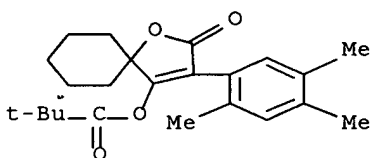
RN 186647-74-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-chloro-5-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



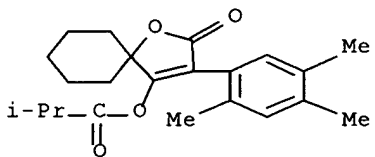
RN 186647-76-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,5-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



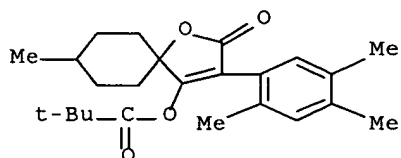
RN 186647-77-8 CAPLUS

CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,4,5-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



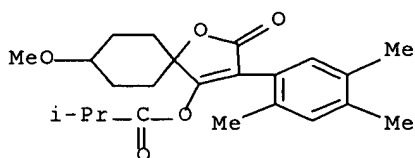
RN 186647-78-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methyl-2-oxo-3-(2,4,5-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



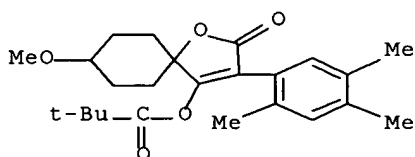
RN 186647-79-0 CAPLUS

CN Propanoic acid, 2-methyl-, 8-methoxy-2-oxo-3-(2,4,5-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



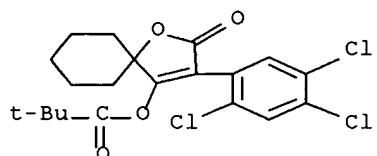
RN 186647-80-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,4,5-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



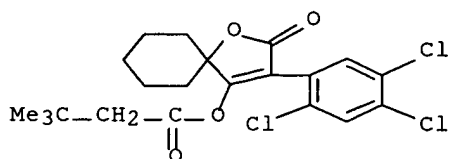
RN 186647-81-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,5-trichlorophenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



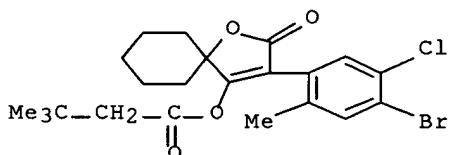
RN 186647-82-5 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 2-oxo-3-(2,4,5-trichlorophenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



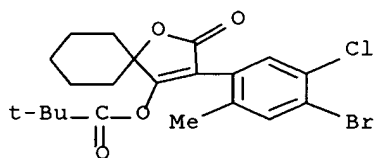
RN 186647-83-6 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-5-chloro-2-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



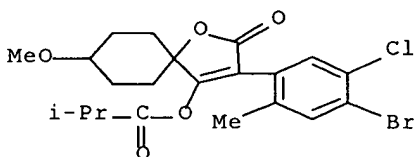
RN 186647-85-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-5-chloro-2-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



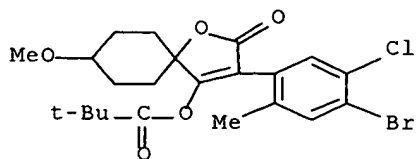
RN 186647-86-9 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(4-bromo-5-chloro-2-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



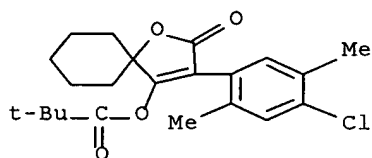
RN 186647-88-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-5-chloro-2-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



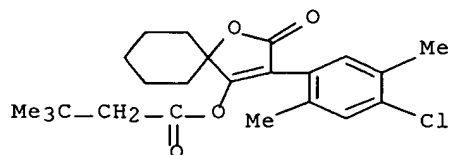
RN 186647-90-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-chloro-2,5-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



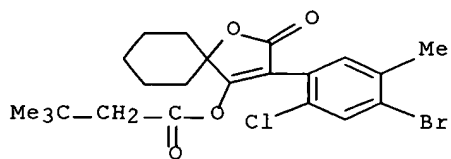
RN 186647-92-7 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-chloro-2,5-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



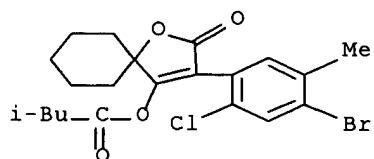
RN 186647-94-9 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-2-chloro-5-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 186647-96-1 CAPLUS

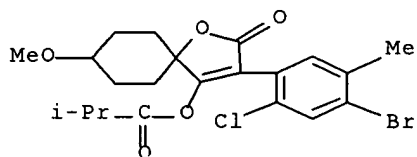
CN Butanoic acid, 3-methyl-, 3-(4-bromo-2-chloro-5-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 186647-97-2 CAPLUS

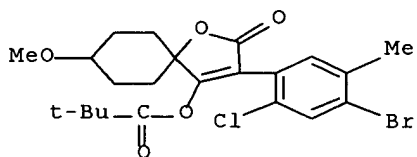
CN Propanoic acid, 2-methyl-, 3-(4-bromo-2-chloro-5-methylphenyl)-8-methoxy-2-

oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



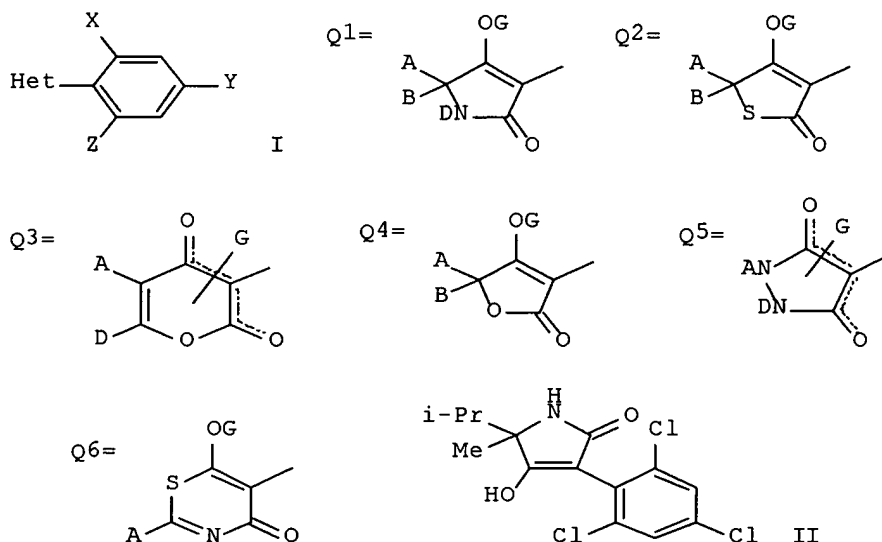
RN 186647-98-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2-chloro-5-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



L6 ANSWER 20 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1997:41800 CAPLUS  
 DN 126:74741  
 TI Alkyl dihalogenated phenyl-substituted keto enols useful as pesticides and herbicides  
 IN Lieb, Folker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Dahmen, Peter; Dollinger, Markus; Santel, Hans-Joachim; et al.  
 PA Bayer A.-G., Germany; Lieb, Folker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; et al.  
 SO PCT Int. Appl., 231 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9635664	A1	19961114	WO 1996-EP1781	19960429
	W: AU, BB, BG, BR, BY, CA, CN, CZ, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, TR, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	DE 19545467	A1	19961114	DE 1995-19545467	19951206
	CA 2220440	AA	19961114	CA 1996-2220440	19960429
	AU 9657626	A1	19961129	AU 1996-57626	19960429
	EP 825982	A1	19980304	EP 1996-914146	19960429
	EP 825982	B1	20021127		
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
	CN 1189153	A	19980729	CN 1996-195072	19960429
	BR 9608229	A	19981229	BR 1996-8229	19960429
	JP 11505220	T2	19990518	JP 1996-533707	19960429
	ZA 9603633	A	19961125	ZA 1996-3633	19960508
	US 6316486	B1	20011113	US 1997-945664	19971031
	US 6380246	B1	20020430	US 1999-404424	19990923
PRAI	DE 1995-19516258	A	19950509		
	DE 1995-19545467	A	19951206		
	WO 1996-EP1781	W	19960429		
	US 1997-945664	B3	19971031		
OS	MARPAT 126:74741				
GI					



AB Title compds. I [X = halo, Y, Z = halo or alkyl, provided that 1 of Y and Z always = halo, and the other = alkyl; Het = 1 of the heterocyclic groups

Q1-Q6; A = H, (halo)alkyl, alkenyl, alkoxyalkyl, (un)substituted cycloalkyl or heterocyclyl, etc.; B = H, alkyl, alkoxyalkyl; D = H, (un)substituted alk(en/yn)yl, alkoxyalkyl, cycloalkyl, aralkyl, heterocyclyl, aryl, etc.; A and B, or A and D, may form (un)substituted carbo- or heterocyclic rings; G = various acyl, sulfonyl, or phosphoryl substituents, or metal or ammonium ions] are prepd. Also disclosed are several processes for prepg. the compds., and their use as pesticides

and

herbicides. For example, amidation of 2,4-dichloro-6-methylphenylacetic acid with H<sub>2</sub>NC(Me)(i-Pr)CN via the acid chloride using SOCl<sub>2</sub> (81%), followed by alcoholysis of the nitrile using H<sub>2</sub>SO<sub>4</sub> and MeOH quench

(73%),

and cyclization of the resultant ester with KOBu-tert in THF (73%), gave title compd. II. In a test against *Myzus persicae* at 0.1%, II gave 100% kill in 6 days. At 250 g/ha preemergence, selected I gave 80-100% kill

of

4 weeds with 0-50% damage to *Beta vulgaris*.

IT **185151-67-1P**

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation);

RACT

(Reactant or reagent); USES (Uses)

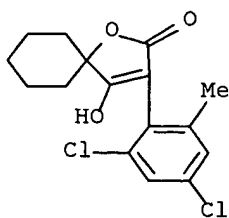
(prepn. of alkyldihalophenyl-substituted keto enols as pesticides and herbicides)

RN 185151-67-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichloro-6-methylphenyl)-4-hydroxy-

(9CI) (CA INDEX NAME)



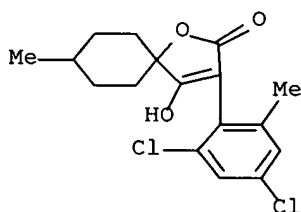


IT 185151-68-2P 185151-69-3P 185151-71-7P  
 185151-72-8P 185151-74-0P 185151-75-1P  
 185151-79-5P 185151-80-8P 185151-81-9P  
 185151-82-0P 185151-84-2P 185151-85-3P  
 185151-86-4P 185151-87-5P 185151-89-7P  
 185151-91-1P 185151-94-4P 185151-96-6P  
 185152-03-8P 185152-04-9P 185152-05-0P  
 185152-07-2P 185152-08-3P 185152-16-3P  
 185152-17-4P 185152-19-6P 185152-20-9P  
 185152-26-5P 185152-27-6P 185152-28-7P  
 185152-30-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of alkylidihalophenyl-substituted keto enols as pesticides and herbicides)

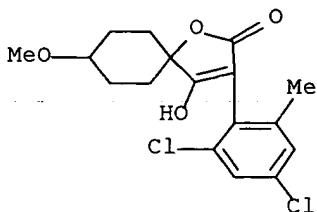
RN 185151-68-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichloro-6-methylphenyl)-4-hydroxy-8-methyl- (9CI) (CA INDEX NAME)

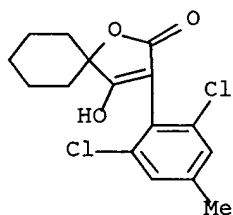


RN 185151-69-3 CAPLUS

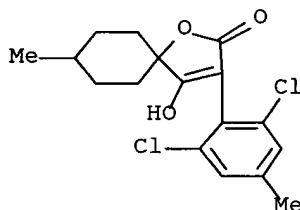
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichloro-6-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



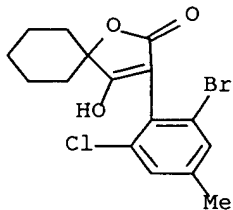
RN 185151-71-7 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,6-dichloro-4-methylphenyl)-4-hydroxy-  
 (9CI) (CA INDEX NAME)



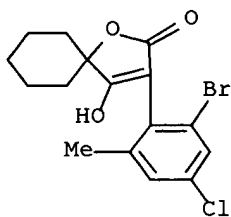
RN 185151-72-8 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,6-dichloro-4-methylphenyl)-4-hydroxy-8-methyl- (9CI) (CA INDEX NAME)



RN 185151-74-0 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-bromo-6-chloro-4-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)

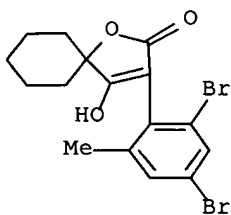


RN 185151-75-1 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-bromo-4-chloro-6-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



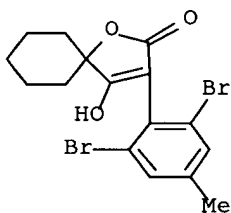
RN 185151-79-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dibromo-6-methylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



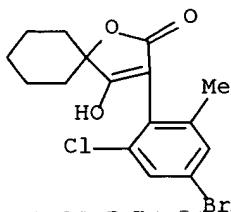
RN 185151-80-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,6-dibromo-4-methylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



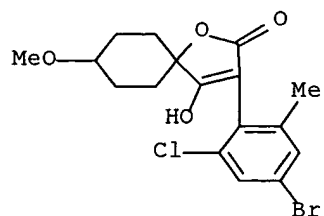
RN 185151-81-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-chloro-6-methylphenyl)-4-  
hydroxy- (9CI) (CA INDEX NAME)



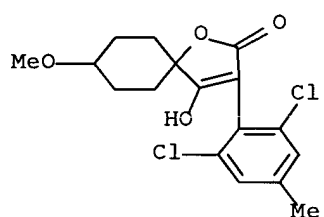
RN 185151-82-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-chloro-6-methylphenyl)-4-  
hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



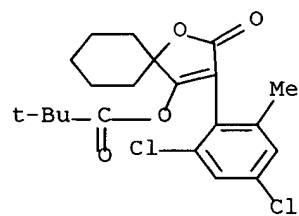
RN 185151-84-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,6-dichloro-4-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



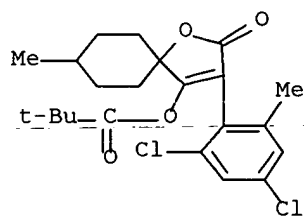
RN 185151-85-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



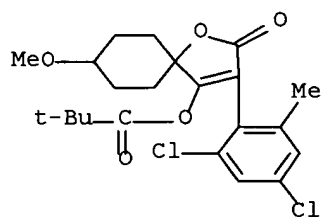
RN 185151-86-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



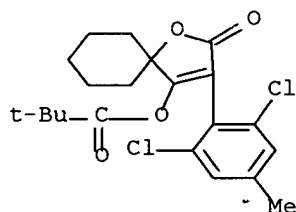
RN 185151-87-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



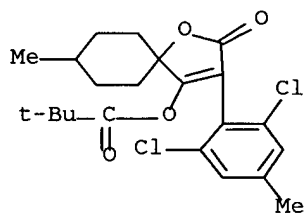
RN 185151-89-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



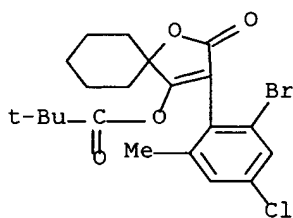
RN 185151-91-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



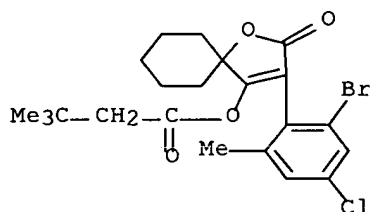
RN 185151-94-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



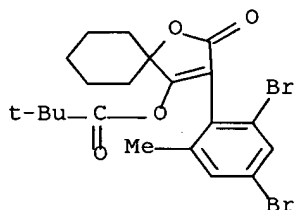
RN 185151-96-6 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



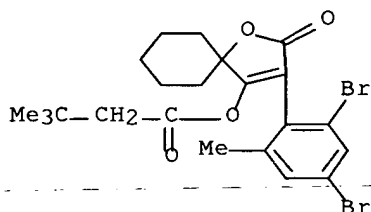
RN 185152-03-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dibromo-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



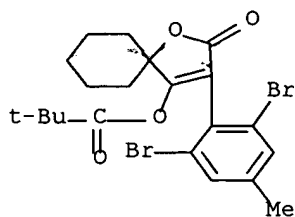
RN 185152-04-9 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2,4-dibromo-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



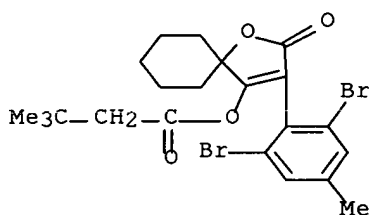
RN 185152-05-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dibromo-4-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



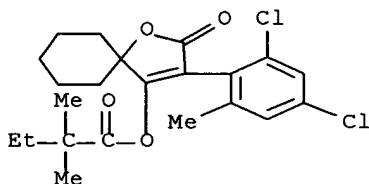
RN 185152-07-2 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2,6-dibromo-4-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



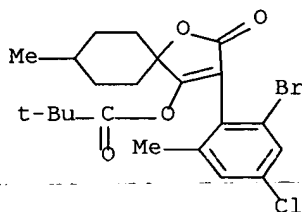
RN 185152-08-3 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



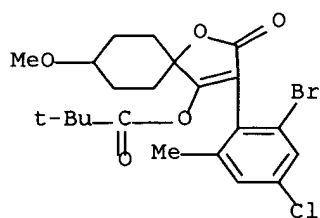
RN 185152-16-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



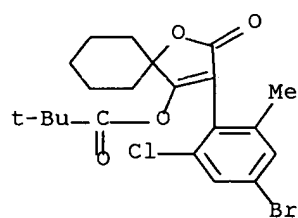
RN 185152-17-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



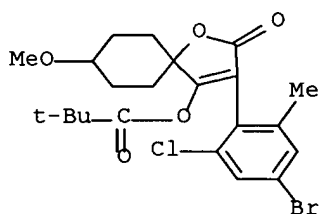
RN 185152-19-6 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2-chloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



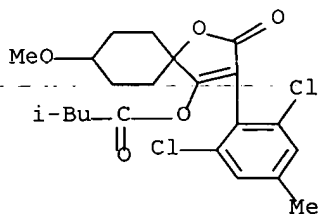
RN 185152-20-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2-chloro-6-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 185152-26-5 CAPLUS

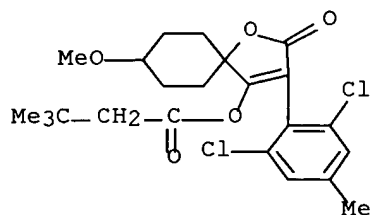
CN Butanoic acid, 3-methyl-, 3-(2,6-dichloro-4-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





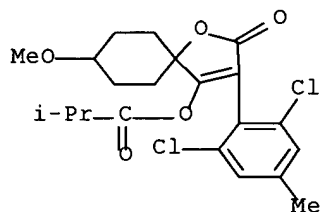
RN 185152-27-6 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



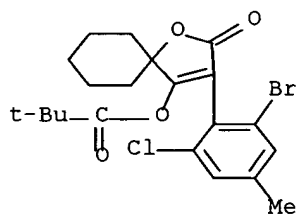
RN 185152-28-7 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,6-dichloro-4-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



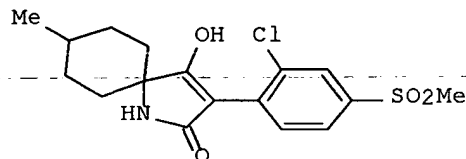
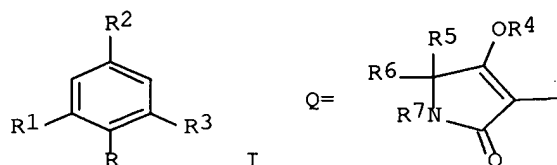
RN 185152-30-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-6-chloro-4-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



L6 ANSWER 21 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1996:577745 CAPLUS  
 DN 125:221568  
 TI Preparation of 3-phenyl-2,4-dioxopyrrolidine tautomers and analogs as herbicides and pesticides  
 IN Fischer, Reiner; Bretschneider, Thomas; Hagemann, Hermann; Lieb, Folker; Lui, Norbert; Ruther, Michael; Widdig, Arno; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; et al.  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 94 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19543864	A1	19960814	DE 1995-19543864	19951124
	WO 9625395	A1	19960822	WO 1996-EP382	19960131
	W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9647158	A1	19960904	AU 1996-47158	19960131
	BR 9606956	A	19971028	BR 1996-6956	19960131
	EP 809629	A1	19971203	EP 1996-902951	19960131
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
	CN 1173866	A	19980218	CN 1996-191907	19960131
	JP 11500114	T2	19990106	JP 1996-524608	19960131
	ZA 9601107	A	19960828	ZA 1996-1107	19960212
	US 6358887	B1	20020319	US 1997-875872	19970805
	US 2003045432	A1	20030306	US 2001-14713	20011211
PRAI	DE 1995-19504621	A1	19950213		
	DE 1995-19543864	A	19951124		
	WO 1996-EP382	W	19960131		
	US 1997-875872	A3	19970805		
OS	MARPAT 125:221568				
GI					



AB Title compds. [I; R = oxopyrrolinyl group Q; R1 = halo, alkyl, alkoxy, Ph, etc.; R2,R3 = H, halo, alkyl, alkoxy, etc.; R4 = H, alkanoyl, alkoxy carbonyl, etc.; R5 = H, alkyl, (hetero)aryl, etc.; R6 = H, (alkoxy)alkyl; R5R6 = atoms to form a ring; R7 = H, alkyl, (hetero)aryl, etc.; R6R7 = atoms to form a ring] were prepd. Thus, 2,4-

Cl(MeO2S)C6H3Me

was converted in 3 steps to 2,4-Cl(MeO2S)C6H3CH2CO2H which was amidated by Me 1-amino-4-methylcyclohexanecarboxylate and the product cyclized to give

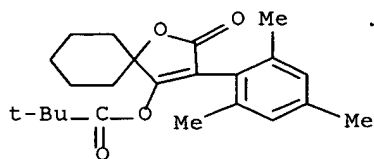
title compd. II. The latter gave complete control of Nephrotettix cinctipes on rice seedlings at 0.1%.

IT **148476-66-8P 181299-98-9P 181299-99-0P 181300-00-5P**

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 3-phenyl-2,4-dioxopyrrolidine tautomers and analogs as herbicides and pesticides)

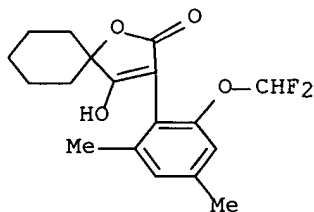
RN 148476-66-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



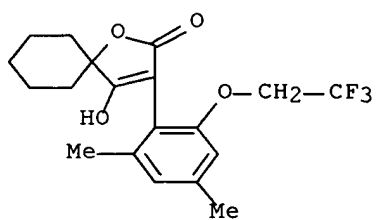
RN 181299-98-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-[2-(difluoromethoxy)-4,6-dimethylphenyl]-4-hydroxy- (9CI) (CA INDEX NAME)



RN 181299-99-0 CAPLUS

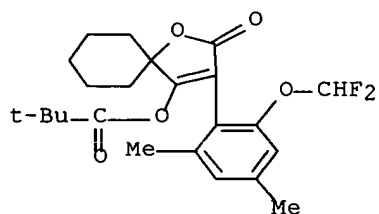
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-[2,4-dimethyl-6-(2,2,2-trifluoroethoxy)phenyl]-4-hydroxy- (9CI) (CA INDEX NAME)



RN 181300-00-5 CAPLUS

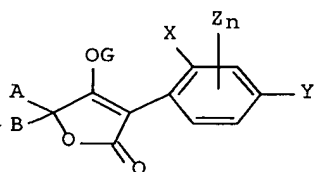
CN Propanoic acid, 2,2-dimethyl-, 3-[2-(difluoromethoxy)-4,6-dimethylphenyl]-

2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

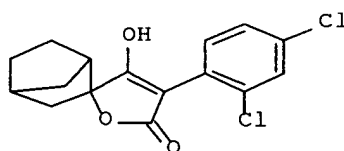


L6 ANSWER 22 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1995:638410 CAPLUS  
 DN 123:32947  
 TI Preparation of 3-aryl-4-hydroxy-.DELTA.3-dihydrofuranones as pesticides.  
 IN Fischer, Reiner; Krueger, Bernd Wieland; Santel, Hans-Joachim;  
 Dollinger,  
 Markus; Wachendorff-Neumann, Ulrike; Erdelen, Christoph; Erdelen,  
 Christoph Dr  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 116 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4337853	A1	19950323	DE 1993-4337853	19931105
	AU 9471599	A1	19950330	AU 1994-71599	19940831
	EP 647637	A1	19950412	EP 1994-113566	19940831
	EP 647637	B1	19990127		
	R: BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, PT				
	ES 2127859	T3	19990501	ES 1994-113566	19940831
	US 5610122	A	19970311	US 1994-303987	19940909
	ZA 9407183	A	19950511	ZA 1994-7183	19940916
	CN 1103642	A	19950614	CN 1994-115915	19940916
	CN 1061040	B	20010124		
	JP 07179450	A2	19950718	JP 1994-246807	19940916
	BR 9403768	A	19950516	BR 1994-3768	19940919
	US 5719310	A	19980217	US 1996-740974	19961105
	CN 1292375	A	20010425	CN 2000-101949	20000131
PRAI	DE 1993-4331672	A1	19930917		
	DE 1993-4337853	A	19931105		
	US 1994-303987	A3	19940909		
OS	MARPAT 123:32947				
GI					



I



II

AB Title compds. [I; X = alkyl, halo, alkoxy, haloalkyl; Y = H, alkyl,  
 halo,  
 alkoxy, haloalkyl; Z = alkyl, halo, alkoxy; n = 0-3; XZ = atoms to form  
 a  
 fused benzo ring; G = H, COR1, SO2R3, C(:L)MR2, P(:L)R4R5, metal ion,  
 ammonium, etc.; AB = atoms to form a (substituted) (unsatd.) ring which  
 can be interrupted by an O or S atom; R1 = (halo-substituted) alkyl,  
 alkenyl, alkoxyalkyl, alkylthioalkyl, polyalkoxyalkyl, cycloalkyl which

can be interrupted by heteroatoms, (substituted) Ph, phenylalkyl, heteroaryl, phenoxyalkyl, heteroaryloxyalkyl; R2 = (halo-substituted) alkyl, alkenyl, alkoxyalkyl, polyalkoxyalkyl, (substituted) Ph, PhCH2; R3-R5 = (halo-substituted) alkyl, alkoxy, alkylamino, dialkylamino, alkylthio, alkenylthio, alkynylthio, cycloalkylthio, (substituted) Ph, PhO, PhS], were prepd. Thus, Et 2-hydroxynorbornan-2-carboxylate was refluxed with 2,4-dichlorophenylacetyl chloride in PhMe and the

resulting

diester was stirred with KOCMe3 in DMF to give title compd. (II).

Several

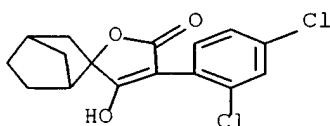
I at 0.001% gave .gtoreq.85% kill of Myzus persicae on cabbage leaves.

IT 164153-44-0P 164153-45-1P 164153-46-2P  
 164153-47-3P 164153-51-9P 164153-52-0P  
 164153-53-1P 164153-54-2P 164153-55-3P  
 164153-56-4P 164153-57-5P 164153-58-6P  
 164153-59-7P 164153-60-0P 164153-61-1P  
 164153-62-2P 164153-63-3P 164153-64-4P  
 164153-65-5P 164153-66-6P 164153-67-7P  
 164153-68-8P 164153-69-9P 164153-70-2P  
 164153-71-3P 164153-72-4P 164153-73-5P  
 164153-74-6P 164153-75-7P 164153-81-5P  
 164153-82-6P 164153-83-7P 164153-84-8P  
 164153-85-9P 164153-86-0P 164153-87-1P  
 164153-88-2P 164153-89-3P 164153-90-6P  
 164153-91-7P 164153-92-8P 164153-93-9P  
 164153-94-0P 164153-95-1P 164153-96-2P  
 164153-97-3P 164153-98-4P 164153-99-5P  
 164154-00-1P 164154-01-2P 164154-02-3P  
 164154-03-4P 164154-04-5P 164154-05-6P  
 164154-06-7P 164154-08-9P 164154-09-0P  
 164154-10-3P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 3-aryl-4-hydroxy-.DELTA.3-dihydrofuranones as pesticides)

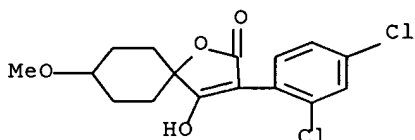
RN 164153-44-0 CAPLUS

CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 4'-(2,4-dichlorophenyl)-3'-hydroxy- (9CI) (CA INDEX NAME)

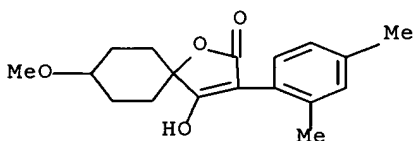


RN 164153-45-1 CAPLUS

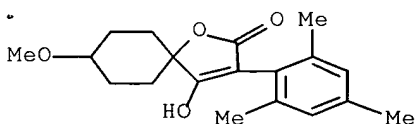
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



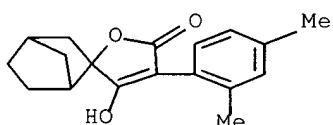
RN 164153-46-2 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dimethylphenyl)-4-hydroxy-8-methoxy-  
 (9CI) (CA INDEX NAME)



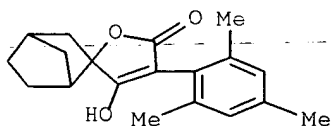
RN 164153-47-3 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methoxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 164153-51-9 CAPLUS  
 CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 4'-(2,4,6-trimethylphenyl)-3'-hydroxy- (9CI) (CA INDEX NAME)

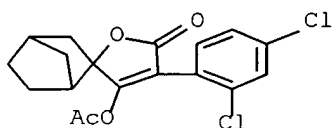


RN 164153-52-0 CAPLUS  
 CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 3'-hydroxy-4'-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



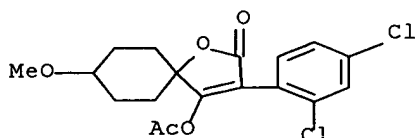
RN 164153-53-1 CAPLUS

CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 3'-(acetyloxy)-4'-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



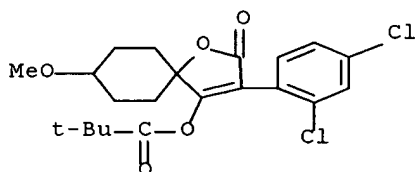
RN 164153-54-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-(2,4-dichlorophenyl)-8-methoxy- (9CI) (CA INDEX NAME)



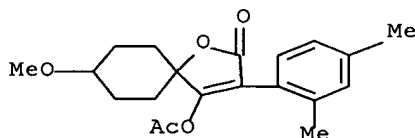
RN 164153-55-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 164153-56-4 CAPLUS

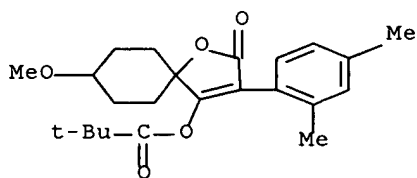
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-(2,4-dimethylphenyl)-8-methoxy- (9CI) (CA INDEX NAME)



RN 164153-57-5 CAPLUS

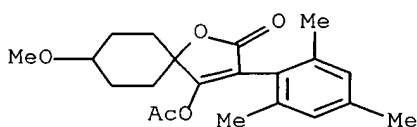
CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





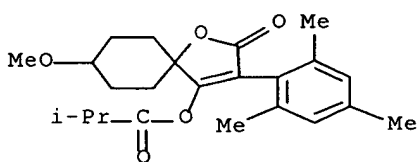
RN 164153-58-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-8-methoxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



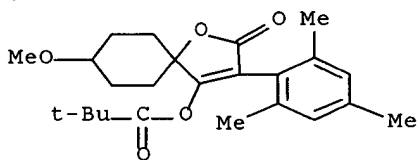
RN 164153-59-7 CAPLUS

CN Propanoic acid, 2-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



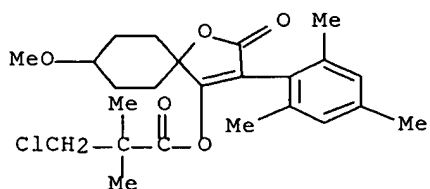
RN 164153-60-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



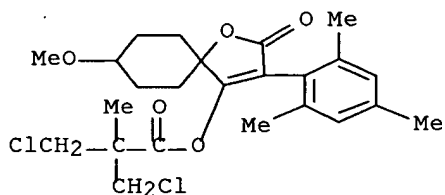
RN 164153-61-1 CAPLUS

CN Propanoic acid, 3-chloro-2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



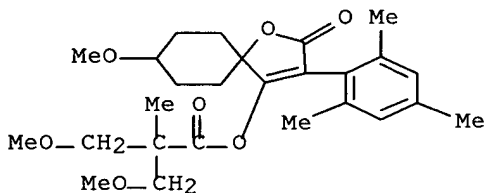
RN 164153-62-2 CAPLUS

CN Propanoic acid, 3-chloro-2-(chloromethyl)-2-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



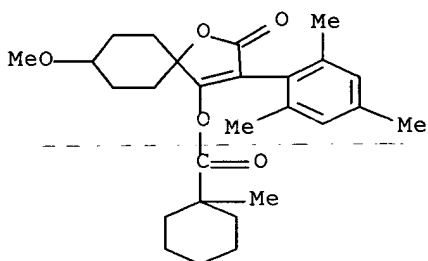
RN 164153-63-3 CAPLUS

CN Propanoic acid, 3-methoxy-2-(methoxymethyl)-2-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

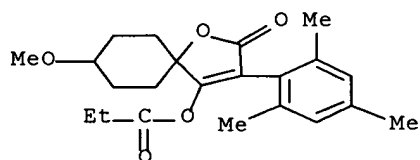


RN 164153-64-4 CAPLUS

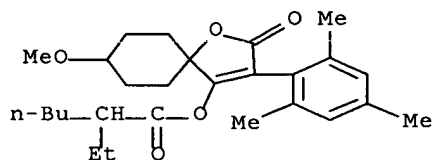
CN Cyclohexanecarboxylic acid, 1-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



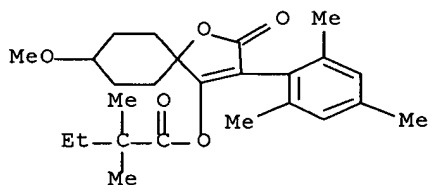
RN 164153-65-5 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 8-methoxy-4-(1-oxopropoxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



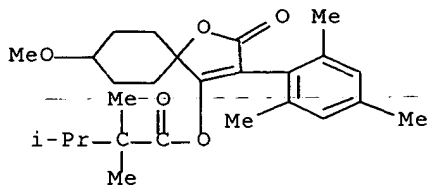
RN 164153-66-6 CAPLUS  
 CN Hexanoic acid, 2-ethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 164153-67-7 CAPLUS  
 CN Butanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

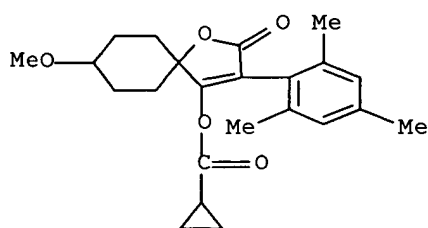


RN 164153-68-8 CAPLUS  
 CN Butanoic acid, 2,2,3-trimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



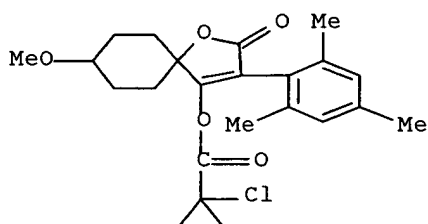
RN 164153-69-9 CAPLUS

CN Cyclopropanecarboxylic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-  
 1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



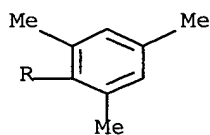
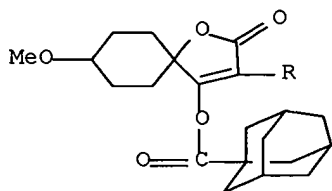
RN 164153-70-2 CAPLUS

CN Cyclopropanecarboxylic acid, 1-chloro-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



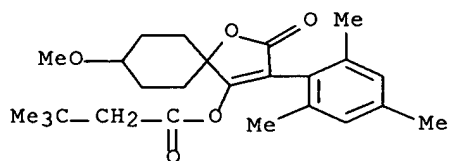
RN 164153-71-3 CAPLUS

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



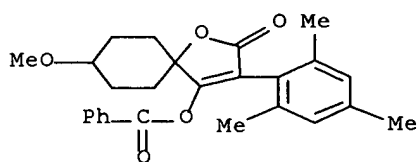
RN 164153-72-4 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-  
 1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



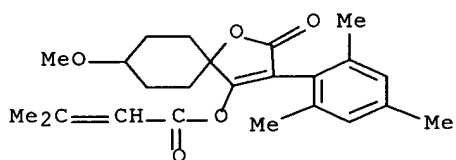
RN 164153-73-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(benzoyloxy)-8-methoxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



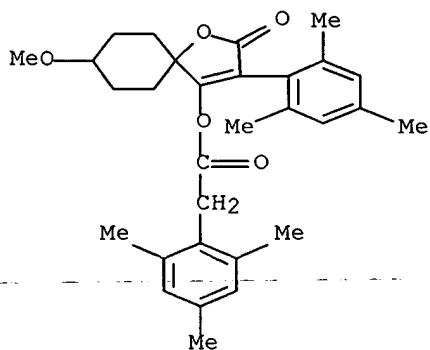
RN 164153-74-6 CAPLUS

CN 2-Butenoic acid, 3-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 164153-75-7 CAPLUS

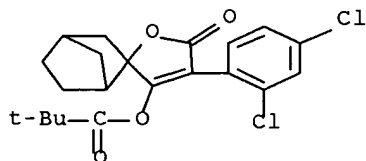
CN Benzeneacetic acid, 2,4,6-trimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 164153-81-5 CAPLUS

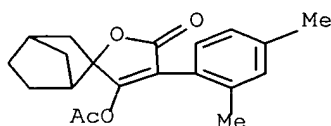
CN Propanoic acid, 2,2-dimethyl-, 4'-(2,4-dichlorophenyl)-5'-

oxospiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



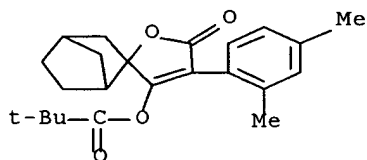
RN 164153-82-6 CAPLUS

CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 3'-(acetyloxy)-4'-(2,4-dimethylphenyl)- (9CI) (CA INDEX NAME)



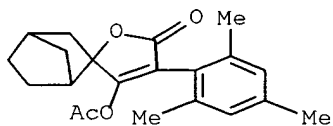
RN 164153-83-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4'-(2,4-dimethylphenyl)-5'-oxospiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



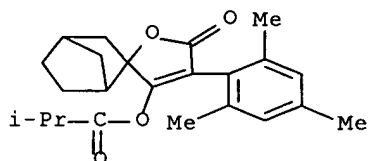
RN 164153-84-8 CAPLUS

CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 3'-(acetyloxy)-4'-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



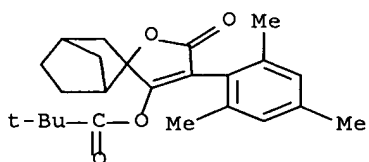
RN 164153-85-9 CAPLUS

CN Propanoic acid, 2-methyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



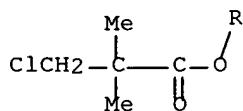
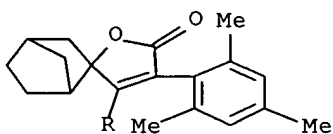
RN 164153-86-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester  
(9CI) (CA INDEX NAME)



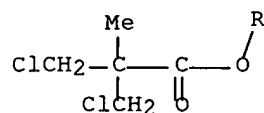
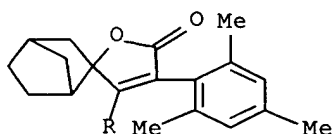
RN 164153-87-1 CAPLUS

CN Propanoic acid, 3-chloro-2,2-dimethyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester  
(9CI) (CA INDEX NAME)



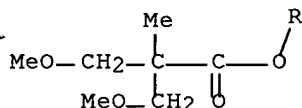
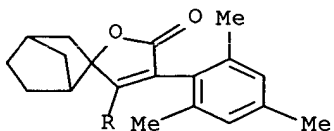
RN 164153-88-2 CAPLUS

CN Propanoic acid, 3-chloro-2-(chloromethyl)-2-methyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester  
(9CI) (CA INDEX NAME)



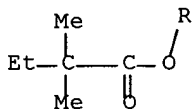
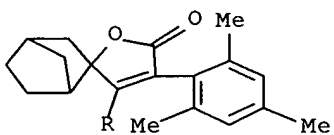
RN 164153-89-3 CAPLUS

CN Propanoic acid, 3-methoxy-2-(methoxymethyl)-2-methyl-,  
5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-  
furan]-3'-yl ester (9CI) (CA INDEX NAME)



RN 164153-90-6 CAPLUS

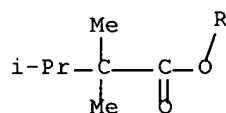
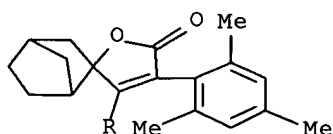
CN Butanoic acid, 2,2-dimethyl-, 5'-oxo-4'-(2,4,6-  
trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester  
(9CI) (CA INDEX NAME)



RN 164153-91-7 CAPLUS

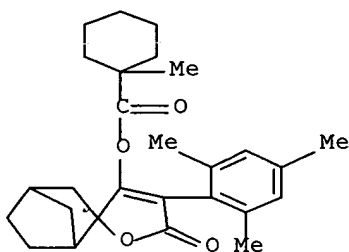
CN Butanoic acid, 2,2,3-trimethyl-, 5'-oxo-4'-(2,4,6-  
trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester  
(9CI) (CA INDEX NAME)





RN 164153-92-8 CAPLUS

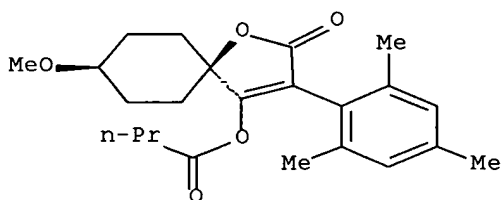
CN Cyclohexanecarboxylic acid, 1-methyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



RN 164153-93-9 CAPLUS

CN Butanoic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester, cis- (9CI) (CA INDEX NAME)

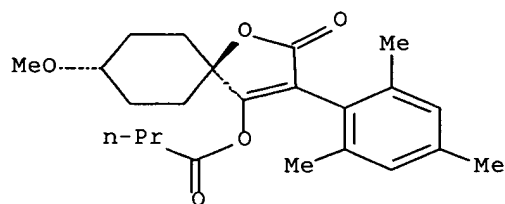
Relative stereochemistry.



RN 164153-94-0 CAPLUS

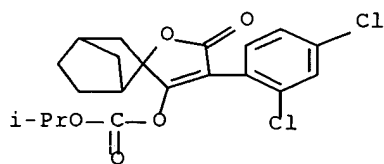
CN Butanoic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



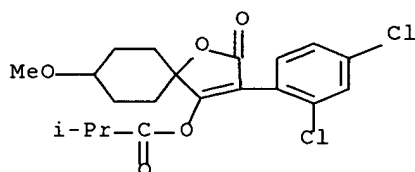
RN 164153-95-1 CAPLUS

CN Carbonic acid, 4'-(2,4-dichlorophenyl)-5'-oxospiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-3'-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



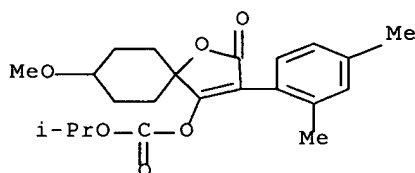
RN 164153-96-2 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,4-dichlorophenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



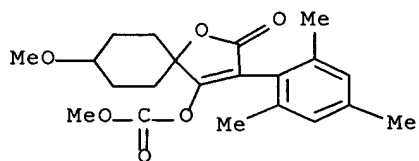
RN 164153-97-3 CAPLUS

CN Carbonic acid, 3-(2,4-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)

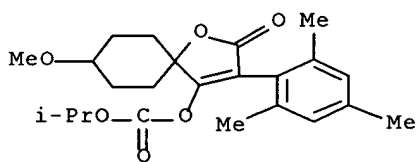


RN 164153-98-4 CAPLUS

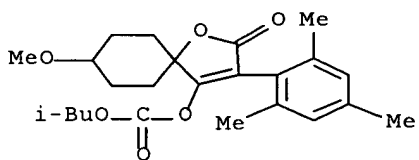
CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl methyl ester (9CI) (CA INDEX NAME)



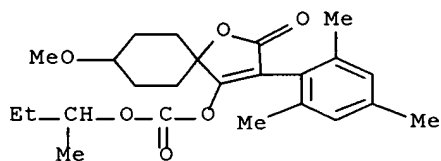
RN 164153-99-5 CAPLUS  
 CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



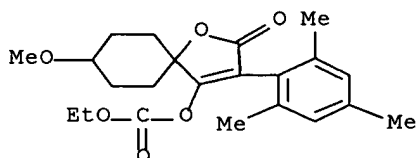
RN 164154-00-1 CAPLUS  
 CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



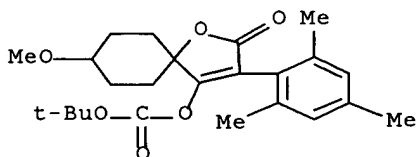
RN 164154-01-2 CAPLUS  
 CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylpropyl ester (9CI) (CA INDEX NAME)



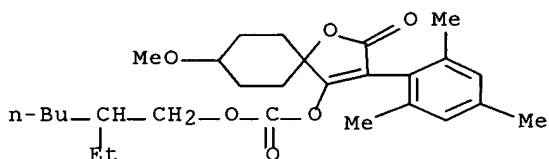
RN 164154-02-3 CAPLUS  
 CN Carbonic acid, ethyl 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



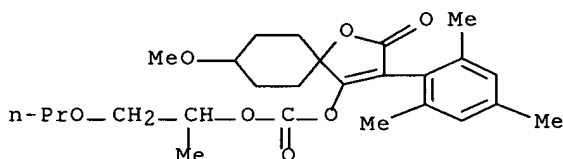
RN 164154-03-4 CAPLUS  
 CN Carbonic acid, 1,1-dimethylethyl 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



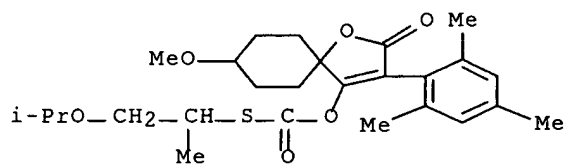
RN 164154-04-5 CAPLUS  
 CN Carbonic acid, 2-ethylhexyl 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 164154-05-6 CAPLUS  
 CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 1-methyl-2-propoxyethyl ester (9CI) (CA INDEX NAME)



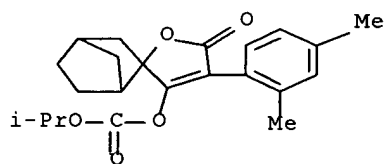
RN 164154-06-7 CAPLUS  
 CN Carbonothioic acid, O-[8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] S-[1-methyl-2-(1-methylethoxy)ethyl] ester (9CI) (CA INDEX NAME)



RN 164154-08-9 CAPLUS

CN Carbonic acid, 4'-(2,4-dimethylphenyl)-5'-oxospiro[bicyclo[2.2.1]heptane-

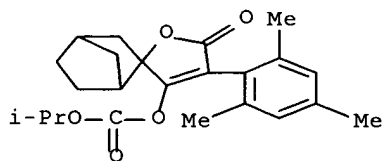
2,2' (5'H)-furan]-3'-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



RN 164154-09-0 CAPLUS

CN Carbonic acid, 1-methylethyl 5'-oxo-4'-(2,4,6-

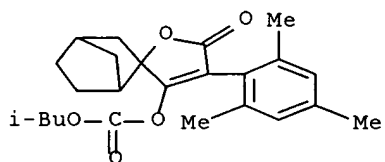
trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,1' (5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



RN 164154-10-3 CAPLUS

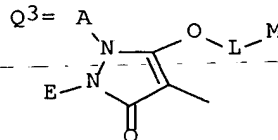
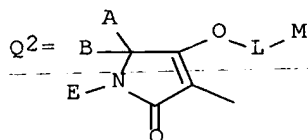
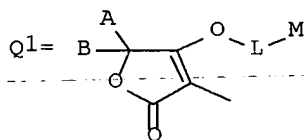
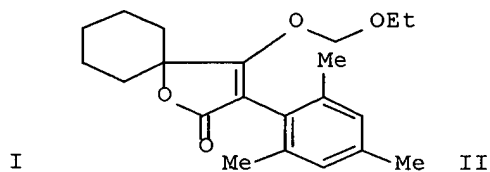
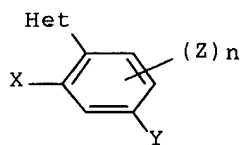
CN Carbonic acid, 2-methylpropyl 5'-oxo-4'-(2,4,6-

trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,1' (5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



L6 ANSWER 23 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1995:444237 CAPLUS  
 DN 122:213917  
 TI Substituted aryl keto-enol heterocycles useful as pesticides  
 IN Bachmann, Juergen; Bretschneider, Thomas; Fischer, Reiner; Krueger, Bernd-Wieland; Santel, Hans-Joachim; Dollinger, Markus; Erdelen, Christoph; Wachendorff-Neumann, Ulrike  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 29 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4413669	A1	19950112	DE 1994-4413669	19940420
	WO 9501971	A1	19950119	WO 1994-EP2042	19940622
	W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, NO, NZ, PL, RO, RU, SK, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9470726	A1	19950206	AU 1994-70726	19940622
	EP 707576	A1	19960424	EP 1994-919657	19940622
	EP 707576	B1	19990303		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT				
	BR 9407006	A	19960806	BR 1994-7006	19940622
	CN 1129444	A	19960821	CN 1994-193093	19940622
	HU 73746	A2	19960930	HU 1996-34	19940622
	JP 09500116	T2	19970107	JP 1994-503788	19940622
	AT 177093	E	19990315	AT 1994-919657	19940622
	ES 2130431	T3	19990701	ES 1994-919657	19940622
	US 5683965	A	19971104	US 1996-569194	19960513
PRAI	DE 1993-4322273		19930705		
	DE 1994-4413669		19940420		
	WO 1994-EP2042		19940622		
OS	CASREACT 122:213917; MARPAT 122:213917				
GI					



AB Title compds. I [X = alkyl, halo, alkoxy; Y = H, alkyl, halo, alkoxy, haloalkyl; Z = alkyl, halo, alkoxy; n = 0-3; Het = group Q1, Q2, or Q3; A,

B, E = H, (halo-substituted) alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl, (hetero)cycloalkyl, (un)substituted (hetero)aryl, aralkyl; or AB or AE forms (un)satd., (un)interrupted, and/or (un)substituted ring(s); L = alkanediyl; M = variety of org. terminal structures and functional groups

including cyano, amide, esters, (thio)ethers, alkynyl, aryl, etc.] and their enantiomers are claimed, and over 30 specific examples are given. The compds. are useful as pesticides, particularly as acaricides, insecticides, fungicides, and herbicides. For example, O-alkylation of 3-(2,4,6-trimethylphenyl)-4-hydroxy-5,5-pentamethylene-.DELTA.3-dihydrofuran-2-one by ClCH2OEt in CH2Cl2 in the presence of Et3N and a small amt. of DMAP at 0-10.degree. gave 53% title compd. II. At a rate

of 0.02% (spray), II gave 98% kill of OP-resistant Tetranychus urticae, and 100% kill of Panonychus ulmi, after 7 days. Addnl. insecticidal and preemergence herbicidal results are given.

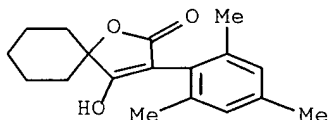
IT 148476-10-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(O-alkylation of; prepn. of substituted aryl keto-enol heterocycles as pesticides)

RN 148476-10-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)-(9CI)  
(CA INDEX NAME)

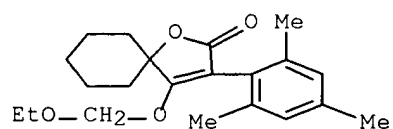


IT 161800-24-4P 161800-25-5P 161800-26-6P  
161800-27-7P 161800-28-8P 161800-29-9P  
161800-30-2P 161800-31-3P 161800-32-4P  
161800-33-5P 161800-34-6P 161800-35-7P  
161800-36-8P 161800-37-9P 161800-38-0P  
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161800-42-6P 161800-43-7P 161800-44-8P  
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161800-48-2P 161800-49-3P 161800-50-6P  
161800-51-7P 161800-52-8P 161800-53-9P  
161800-54-0P 161800-55-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of substituted aryl keto-enol heterocycles as pesticides)

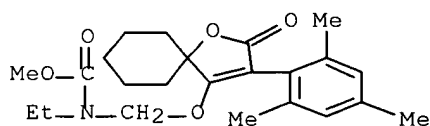
RN 161800-24-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(ethoxymethoxy)-3-(2,4,6-trimethylphenyl)-(9CI) (CA INDEX NAME)



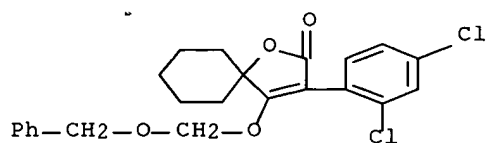
RN 161800-25-5 CAPLUS

CN Carbamic acid, ethyl[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)



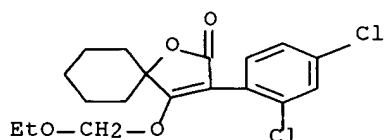
RN 161800-26-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-[(phenylmethoxy)methoxy]- (9CI) (CA INDEX NAME)



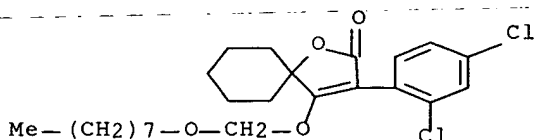
RN 161800-27-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-(ethoxymethoxy)- (9CI) (CA INDEX NAME)



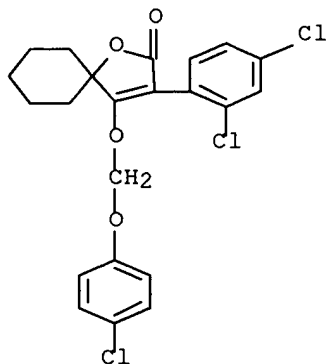
RN 161800-28-8 CAPLUS

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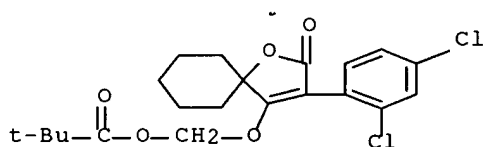




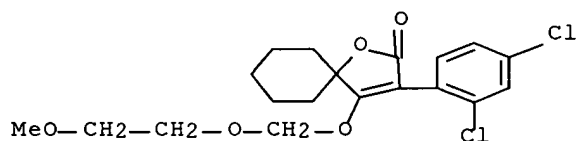
RN 161800-29-9 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(4-chlorophenoxy)methoxy]-3-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



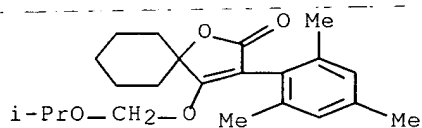
RN 161800-30-2 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, [[3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl ester (9CI) (CA INDEX NAME)



RN 161800-31-3 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-[(2-methoxyethoxy)methoxy]- (9CI) (CA INDEX NAME)

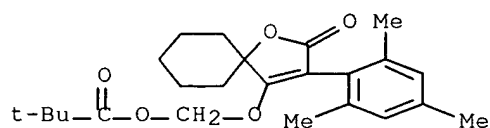


RN 161800-32-4 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(1-methylethoxy)methoxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



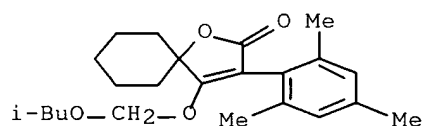
RN 161800-33-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, [[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl ester (9CI) (CA INDEX NAME)



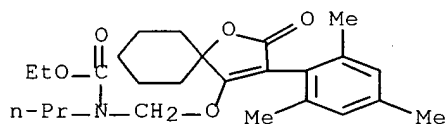
RN 161800-34-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(2-methylpropoxy)methoxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



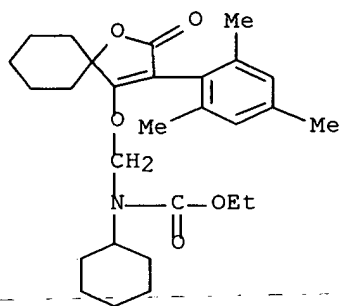
RN 161800-35-7 CAPLUS

CN Carbamic acid, [[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]propyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 161800-36-8 CAPLUS

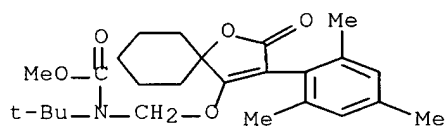
CN Carbamic acid, cyclohexyl[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-, ethyl ester (9CI) (CA INDEX NAME)



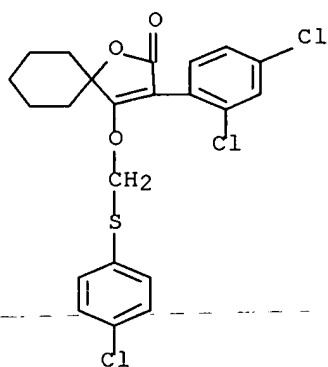
RN 161800-37-9 CAPLUS

CN Carbamic acid, methyl[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-

CN Carbamic acid, (1,1-dimethylethyl)[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)

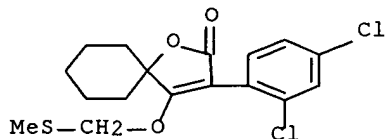


CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[[ (4-chlorophenyl)thio]methoxy]-3-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



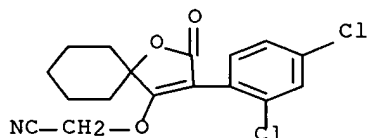
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-

[(methylthio)methoxy]- (9CI) (CA INDEX NAME)



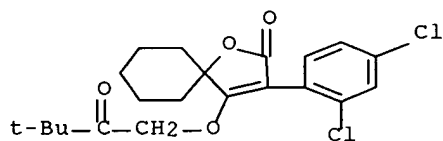
RN 161800-41-5 CAPLUS

CN Acetonitrile, [[3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]- (9CI) (CA INDEX NAME)



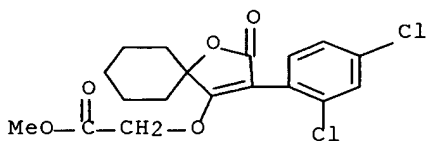
RN 161800-42-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-(3,3-dimethyl-2-oxobutoxy)- (9CI) (CA INDEX NAME)



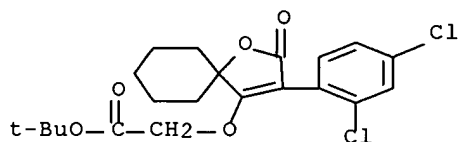
RN 161800-43-7 CAPLUS

CN Acetic acid, [[3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



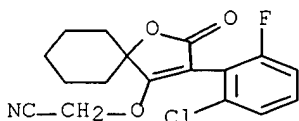
RN 161800-44-8 CAPLUS

CN Acetic acid, [[3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



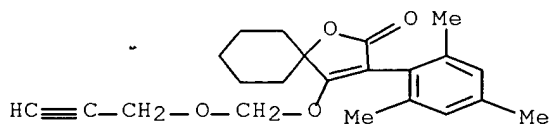
RN 161800-45-9 CAPLUS

CN Acetonitrile, [[3-(2-chloro-6-fluorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]- (9CI) (CA INDEX NAME)



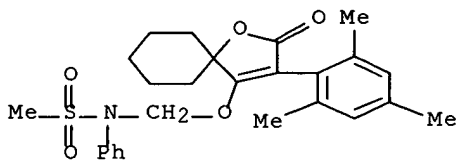
RN 161800-46-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(2-propynyloxy)methoxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



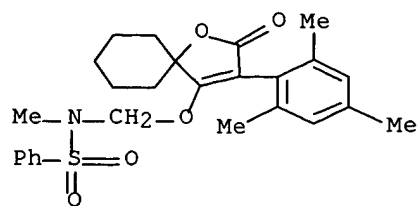
RN 161800-47-1 CAPLUS

CN Methanesulfonamide, N-[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-N-phenyl- (9CI) (CA INDEX NAME)



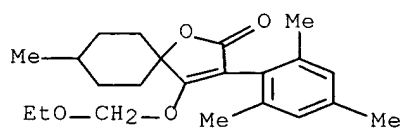
RN 161800-48-2 CAPLUS

CN Benzenesulfonamide, N-methyl-N-[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]- (9CI) (CA INDEX NAME)



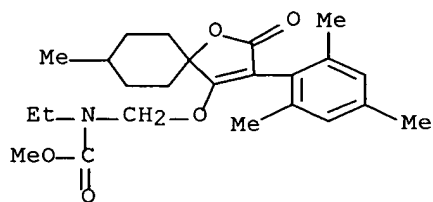
RN 161800-49-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(ethoxymethoxy)-8-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



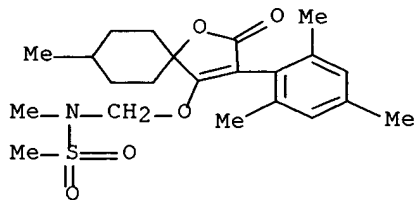
RN 161800-50-6 CAPLUS

CN Carbamic acid, ethyl[[[8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)



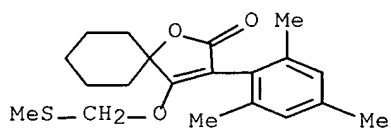
RN 161800-51-7 CAPLUS

CN Methanesulfonamide, N-methyl-N-[[[8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]- (9CI) (CA INDEX NAME)



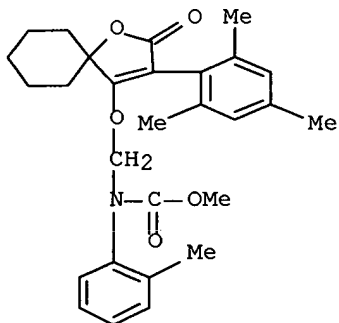
RN 161800-52-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(methylthio)methoxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



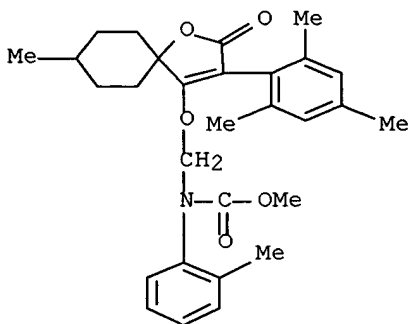
RN 161800-53-9 CAPLUS

CN Carbamic acid, (2-methylphenyl)[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)



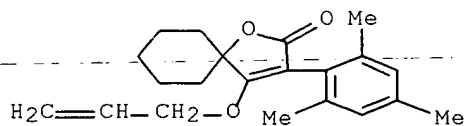
RN 161800-54-0 CAPLUS

CN Carbamic acid, [[[8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl](2-methylphenyl)-, methyl ester (9CI) (CA INDEX NAME)



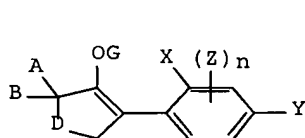
RN 161800-55-1 CAPLUS

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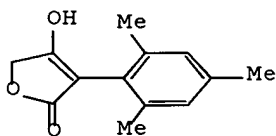


L6 ANSWER 24 OF 24 CAPLUS COPYRIGHT 2003 ACS  
 AN 1993:517088 CAPLUS  
 DN 119:117088  
 TI Preparation and insecticidal, acaricidal, herbicidal, and fungicidal activities of 3-aryl-4-hydroxy-.DELTA.3-dihydrofuranone and -thiophenone derivatives  
 IN Fischer, Reiner; Bretschneider, Thomas; Krueger, Bernd Wieland; Bachmann, Juergen; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Santel, Hans Joachim; Luerssen, Klaus; Schmidt, Robert R.  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 96 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4216814	A1	19930121	DE 1992-4216814	19920521
	EP 528156	A1	19930224	EP 1992-111324	19920703
	EP 528156	B1	19970326		
	R: BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, PT				
	ES 2099770	T3	19970601	ES 1992-111324	19920703
	US 5262383	A	19931116	US 1992-909939	19920707
	AU 9219599	A1	19930121	AU 1992-19599	19920710
	AU 645701	B2	19940120		
	JP 05294953	A2	19931109	JP 1992-206261	19920710
	JP 3113078	B2	20001127		
	BR 9202653	A	19930316	BR 1992-2653	19920713
	ZA 9205260	A	19930428	ZA 1992-5260	19920715
PRAI	DE 1991-4123532	A1	19910716		
	DE 1992-4216814	A	19920521		
OS	MARPAT 119:117088				
GI					



I



II

AB The prepn. of title compds. I, (X = alkyl, halo, alkoxy, haloalkyl; Y = H, alkyl, halo, alkoxy, haloalkyl; Z = alkyl, halo, alkoxy, n = 0-3; G = H, acyl, alkenylalkyl, organosulfonyl, organophosphonyl, diorganoaminoalkenylalkyl; A, B = H, halo substituted alkyl, alkenyl, alkynyl, alkoxyalkyl, alkylthioalkyl, cycloalkyl, etc.; D = O, S), as insecticide, acaricide, herbicide, and fungicide is claimed. Thus,

KOCMe<sub>3</sub>

mediated cyclization of methoxycarbonylmethyl 2,4,6-trimethylphenylacetate in Me<sub>3</sub>COH gave furanone deriv. II.

IT 148476-10-2P 148476-21-5P 148476-22-6P



148476-23-7P 148476-31-7P 148476-33-9P  
 148476-36-2P 148476-38-4P 148476-39-5P  
 148476-42-0P 148476-52-2P 148476-53-3P  
 148476-58-8P 148476-65-7P 148476-66-8P  
 148476-76-0P 148476-77-1P 148476-78-2P  
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RL: BAC (Biological activity or effector, except adverse); BSU

(Biological

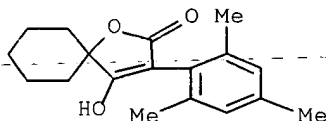
study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. and biol. activity of)

RN 148476-10-2 CAPLUS

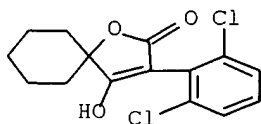
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)-  
(9CI)

(CA INDEX NAME)



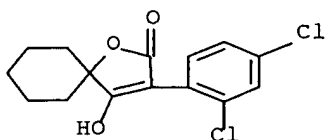
RN 148476-21-5 CAPLUS

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(CA INDEX NAME)



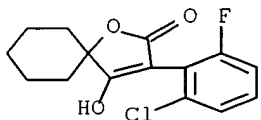
RN 148476-22-6 CAPLUS

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(CA INDEX NAME)



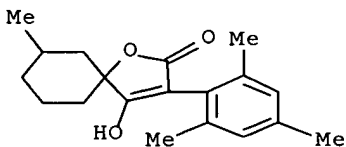
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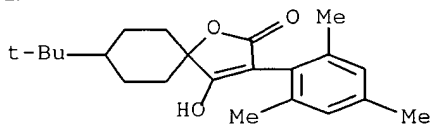
RN 148476-31-7 CAPLUS

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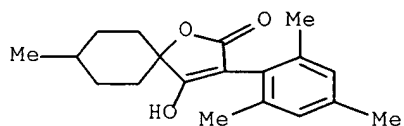


RN 148476-33-9 CAPLUS

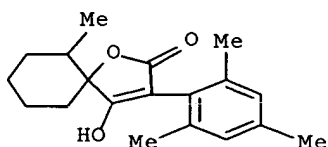
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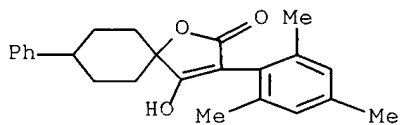
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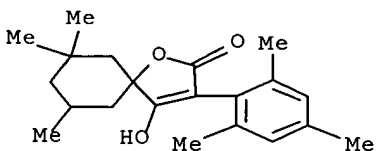
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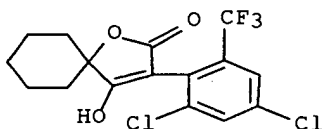
RN 148476-39-5 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-phenyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 148476-42-0 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-7,7,9-trimethyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

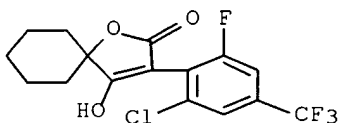


RN 148476-52-2 CAPLUS  
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 4-hydroxy- (9CI) (CA INDEX NAME)



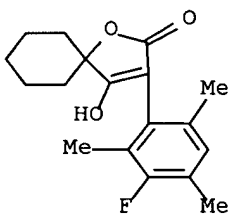
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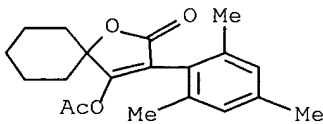
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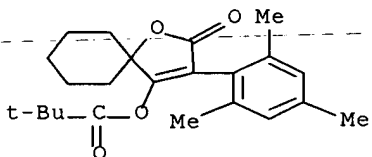
RN 148476-65-7 CAPLUS

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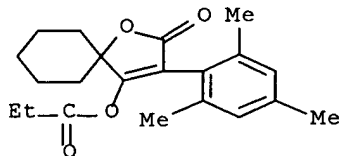


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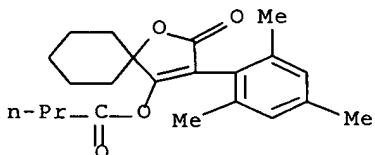
CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



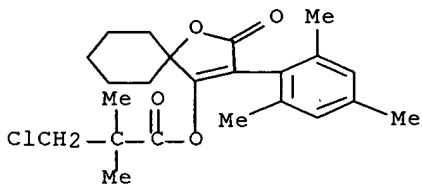
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 (9CI) (CA INDEX NAME)



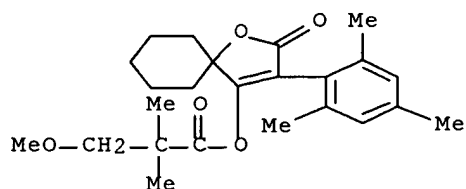
RN 148476-77-1 CAPLUS  
 CN Butanoic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148476-78-2 CAPLUS  
 CN Propanoic acid, 3-chloro-2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

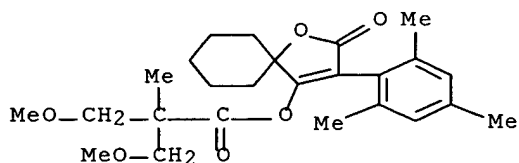


RN 148476-79-3 CAPLUS  
 CN Propanoic acid, 3-methoxy-2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



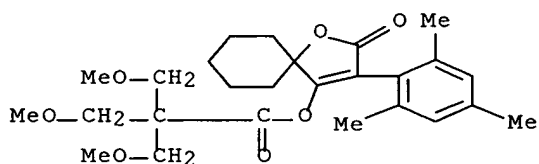
RN 148476-80-6 CAPLUS

CN Propanoic acid, 3-methoxy-2-(methoxymethyl)-2-methyl-,  
2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI)  
(CA INDEX NAME)



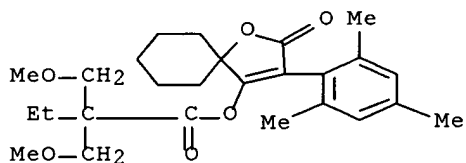
RN 148476-81-7 CAPLUS

CN Propanoic acid, 3-methoxy-2,2-bis(methoxymethyl)-, 2-oxo-3-(2,4,6-  
trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX  
NAME)



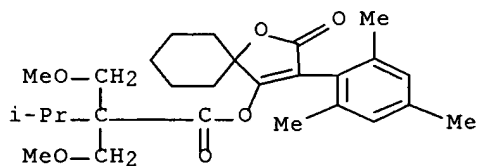
RN 148476-82-8 CAPLUS

CN Butanoic acid, 2,2-bis(methoxymethyl)-, 2-oxo-3-(2,4,6-trimethylphenyl)-  
1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



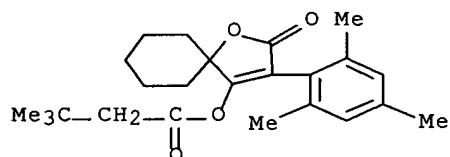
RN 148476-83-9 CAPLUS

CN Butanoic acid, 2,2-bis(methoxymethyl)-3-methyl-, 2-oxo-3-(2,4,6-  
trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX  
NAME)



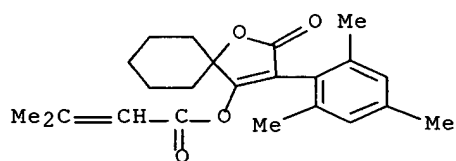
RN 148476-84-0 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



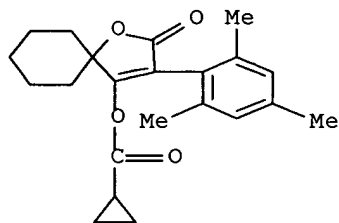
RN 148476-85-1 CAPLUS

CN 2-Butenoic acid, 3-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



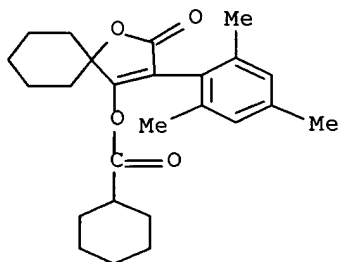
RN 148476-86-2 CAPLUS

CN Cyclopropanecarboxylic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



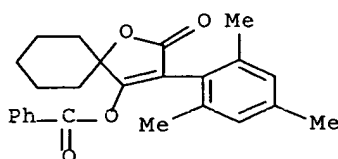
RN 148476-87-3 CAPLUS

CN Cyclohexanecarboxylic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



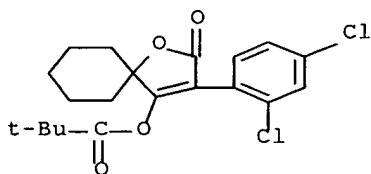
RN 148476-88-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(benzoyloxy)-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)



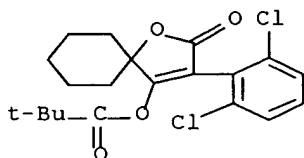
RN 148476-97-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148476-98-6 CAPLUS

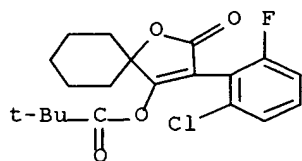
CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



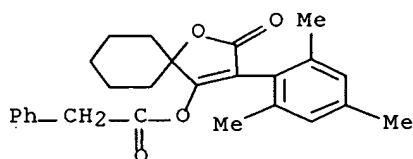
RN 148476-99-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-chloro-6-fluorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

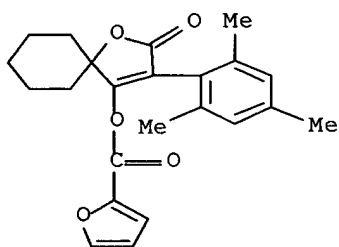




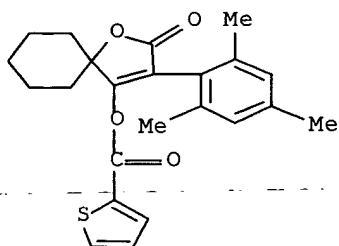
RN 148477-04-7 CAPLUS  
 CN Benzeneacetic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-06-9 CAPLUS  
 CN 2-Furancarboxylic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

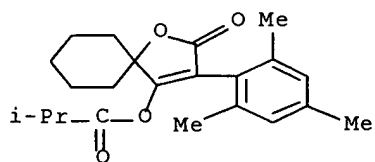


RN 148477-07-0 CAPLUS  
 CN 2-Thiophenecarboxylic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



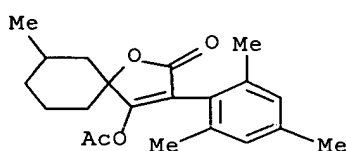
RN 148477-21-8 CAPLUS  
 CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-

oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



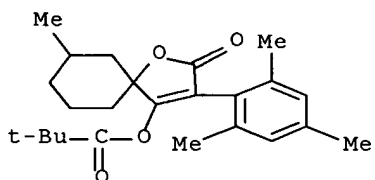
RN 148477-22-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-7-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



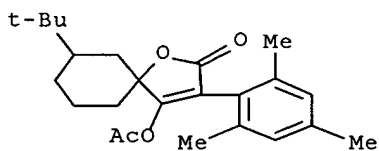
RN 148477-23-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 7-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



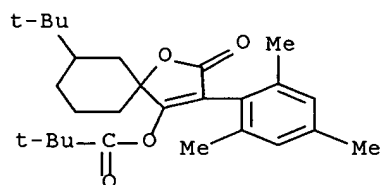
RN 148477-26-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-7-(1,1-dimethylethyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



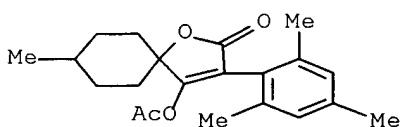
RN 148477-27-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 7-(1,1-dimethylethyl)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



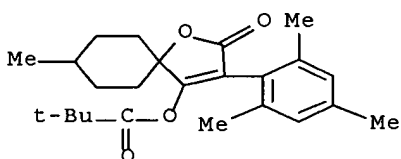
RN 148477-34-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-8-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



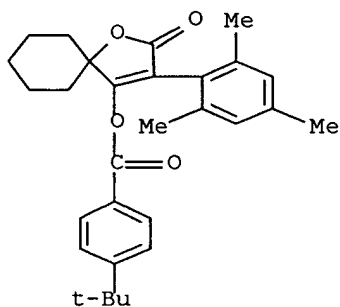
RN 148477-35-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



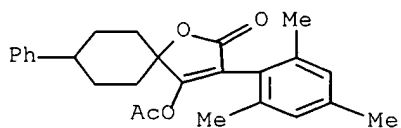
RN 148477-36-5 CAPLUS

CN Benzoic acid, 4-(1,1-dimethylethyl)-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



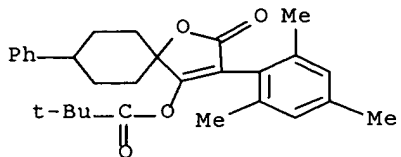
RN 148477-39-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-8-phenyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



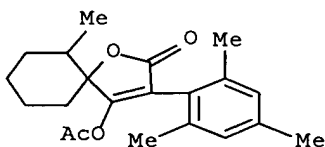
RN 148477-40-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-8-phenyl-3-(2,4,6-trimethylphenyl)-  
1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



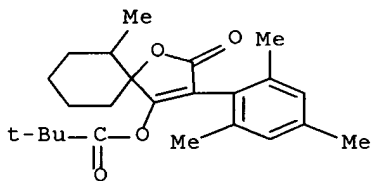
RN 148477-41-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-6-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



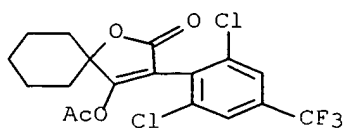
RN 148477-42-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 6-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-  
1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-51-4 CAPLUS

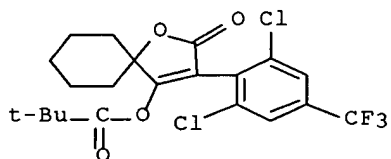
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-[2,6-dichloro-4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



RN 148477-52-5 CAPLUS

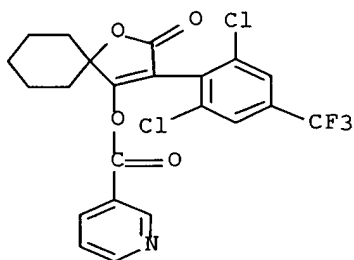
CN Propanoic acid, 2,2-dimethyl-, 3-[2,6-dichloro-4-(trifluoromethyl)phenyl]-

2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



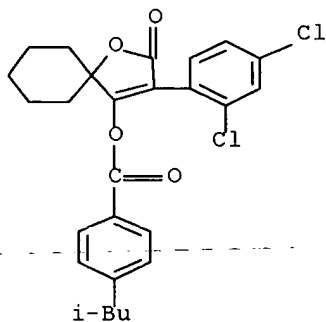
RN 148477-53-6 CAPLUS

CN 3-Pyridinecarboxylic acid, 3-[2,6-dichloro-4-(trifluoromethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



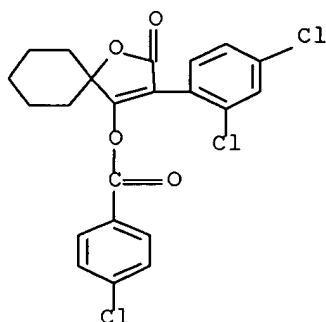
RN 148477-56-9 CAPLUS

CN Benzoic acid, 4-(2-methylpropyl)-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-57-0 CAPLUS

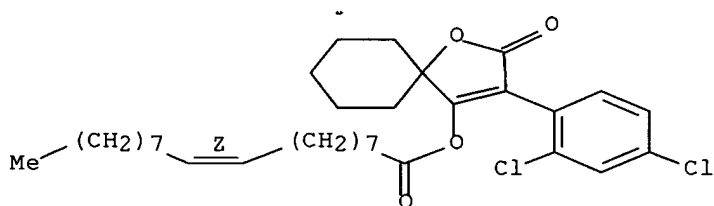
CN Benzoic acid, 4-chloro-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-58-1 CAPLUS

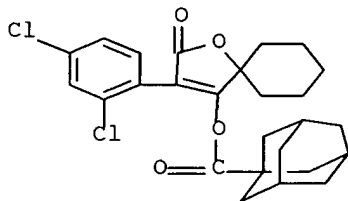
CN 9-Octadecenoic acid (9Z)-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.



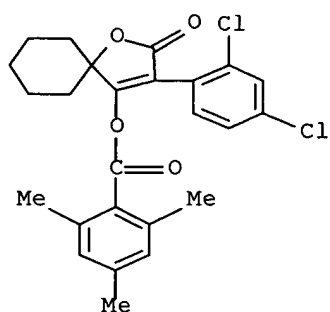
RN 148477-59-2 CAPLUS

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



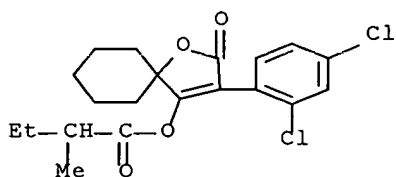
RN 148477-60-5 CAPLUS

CN Benzoic acid, 2,4,6-trimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



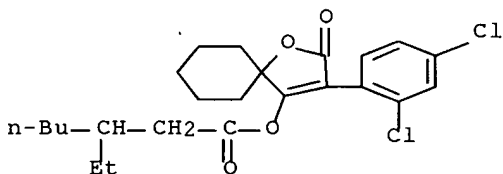
RN 148477-61-6 CAPLUS

CN Butanoic acid, 2-methyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



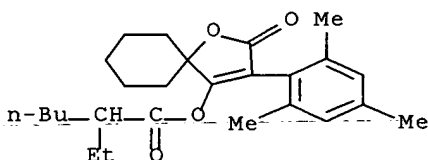
RN 148477-62-7 CAPLUS

CN Heptanoic acid, 3-ethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-63-8 CAPLUS

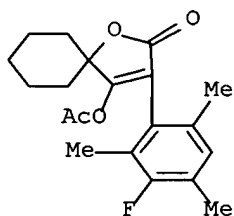
CN Hexanoic acid, 2-ethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-67-2 CAPLUS

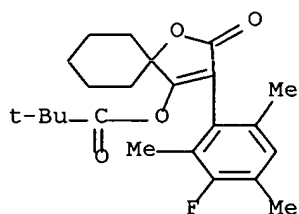
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-(3-fluoro-2,4,6-

trimethylphenyl)- (9CI) (CA INDEX NAME)



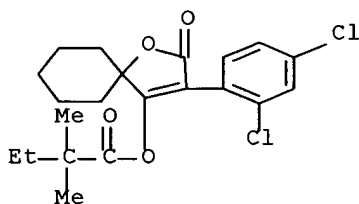
RN 148477-68-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(3-fluoro-2,4,6-trimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



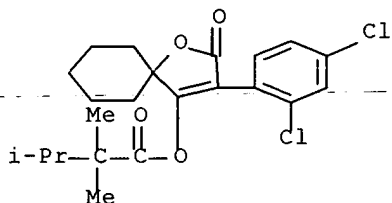
RN 148477-71-8 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



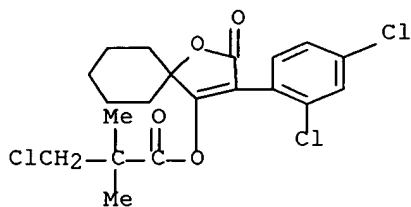
RN 148477-72-9 CAPLUS

CN Butanoic acid, 2,2,3-trimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

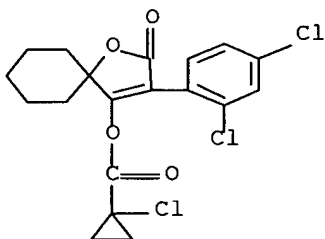




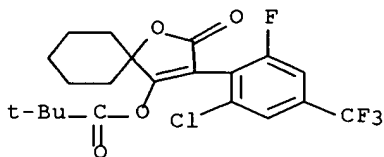
RN 148477-73-0 CAPLUS  
 CN Propanoic acid, 3-chloro-2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



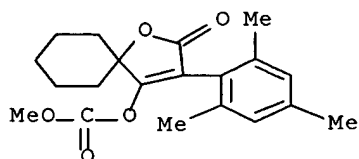
RN 148477-74-1 CAPLUS  
 CN Cyclopropanecarboxylic acid, 1-chloro-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-75-2 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 3-[2-chloro-6-fluoro-4-(trifluoromethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

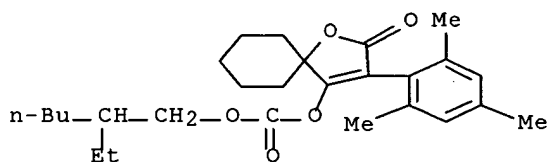


RN 148477-87-6 CAPLUS  
 CN Carbonic acid, methyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



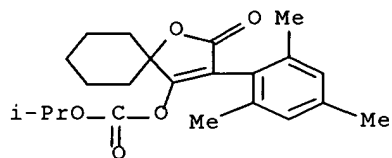
RN 148477-88-7 CAPLUS

CN Carbonic acid, 2-ethylhexyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



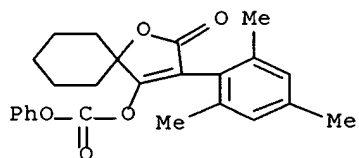
RN 148477-89-8 CAPLUS

CN Carbonic acid, 1-methylethyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



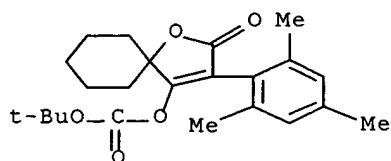
RN 148477-90-1 CAPLUS

CN Carbonic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl phenyl ester (9CI) (CA INDEX NAME)



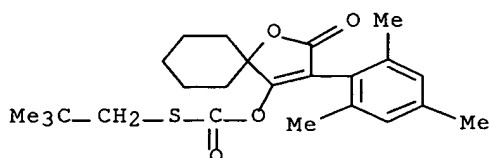
RN 148477-91-2 CAPLUS

CN Carbonic acid, 1,1-dimethylethyl 3-oxo-4-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



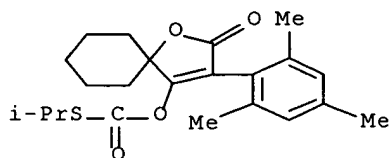
RN 148477-92-3 CAPLUS

CN Carbonothioic acid, S-(2,2-dimethylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-2-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



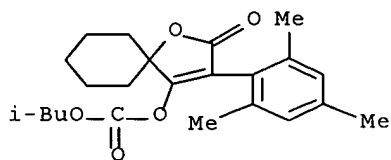
RN 148477-93-4 CAPLUS

CN Carbonothioic acid, S-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



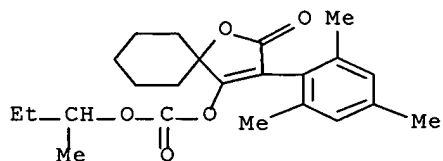
RN 148477-97-8 CAPLUS

CN Carbonic acid, 2-methylpropyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



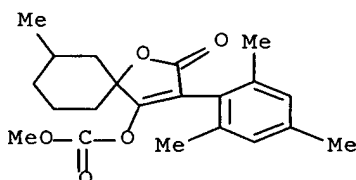
RN 148477-98-9 CAPLUS

CN Carbonic acid, 1-methylpropyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



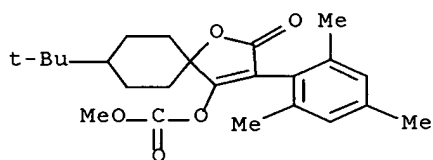
RN 148477-99-0 CAPLUS

CN Carbonic acid, methyl 7-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



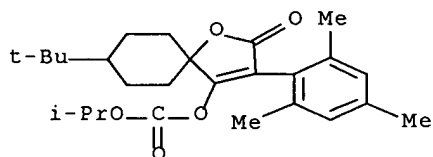
RN 148478-02-8 CAPLUS

CN Carbonic acid, 8-(1,1-dimethylethyl)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl methyl ester (9CI) (CA INDEX NAME)



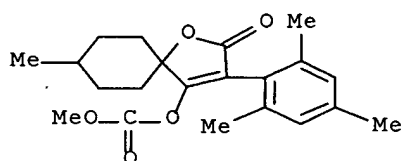
RN 148478-03-9 CAPLUS

CN Carbonic acid, 8-(1,1-dimethylethyl)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



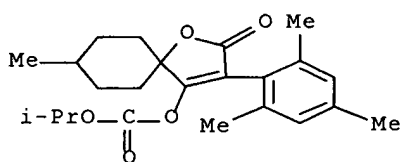
RN 148478-10-8 CAPLUS

CN Carbonic acid, methyl 8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



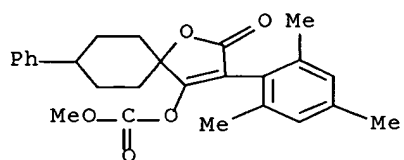
RN 148478-11-9 CAPLUS

CN Carbonic acid, 1-methylethyl 8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



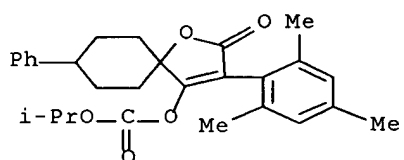
RN 148478-14-2 CAPLUS

CN Carbonic acid, methyl 2-oxo-8-phenyl-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



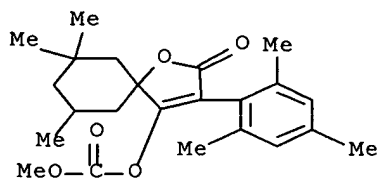
RN 148478-15-3 CAPLUS

CN Carbonic acid, 1-methylethyl 2-oxo-8-phenyl-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



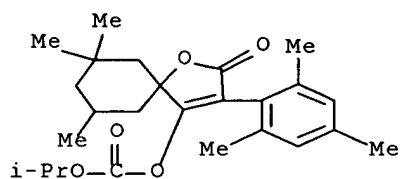
RN 148478-18-6 CAPLUS

CN Carbonic acid, methyl 7,7,9-trimethyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



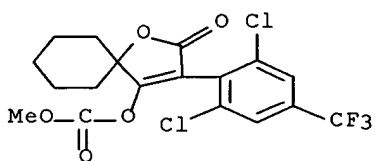
RN 148478-19-7 CAPLUS

CN Carbonic acid, 1-methylethyl 7,7,9-trimethyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



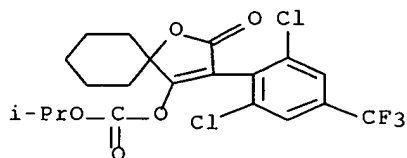
RN 148478-34-6 CAPLUS

CN Carbonic acid, 3-[2,6-dichloro-4-(trifluoromethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl methyl ester (9CI) (CA INDEX NAME)



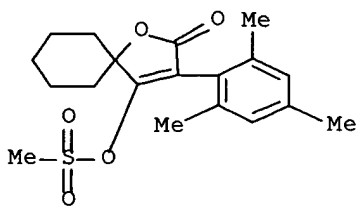
RN 148478-35-7 CAPLUS

CN Carbonic acid, 3-[2,6-dichloro-4-(trifluoromethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



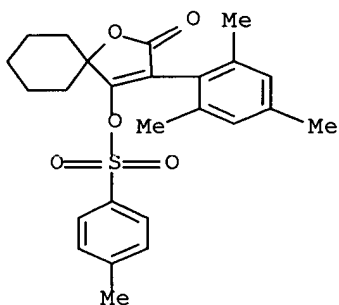
RN 148478-43-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(methanesulfonyl)oxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



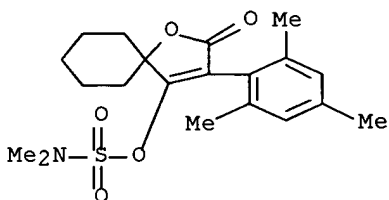
RN 148478-44-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[[4-methylphenyl)sulfonyl]oxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



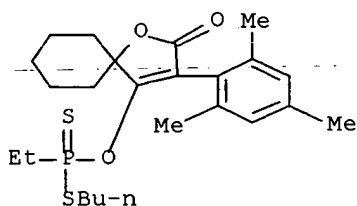
RN 148478-45-9 CAPLUS

CN Sulfamic acid, dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



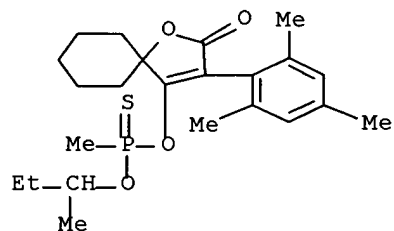
RN 148478-54-0 CAPLUS

CN Phosphonodithioic acid, ethyl-, S-butyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



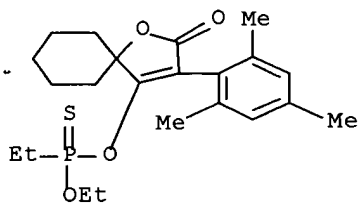
RN 148478-55-1 CAPLUS

CN Phosphonothioic acid, methyl-, O-(1-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



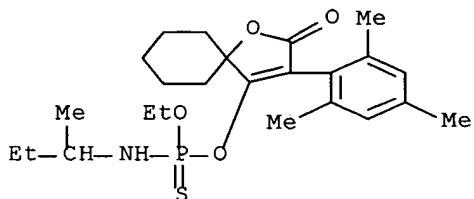
RN 148478-56-2 CAPLUS

CN Phosphonothioic acid, ethyl-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



RN 148478-57-3 CAPLUS

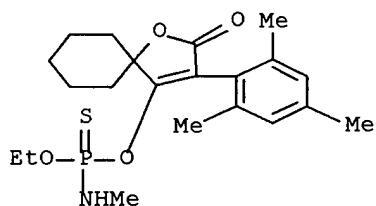
CN Phosphoramidothioic acid, (1-methylpropyl)-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



RN 148478-58-4 CAPLUS

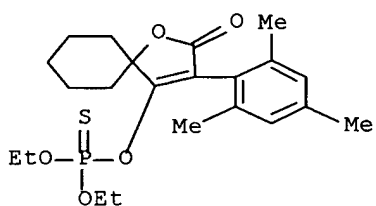
CN Phosphoramidothioic acid, methyl-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)





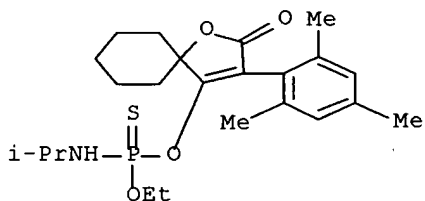
RN 148478-59-5 CAPLUS

CN Phosphorothioic acid, O,O-diethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



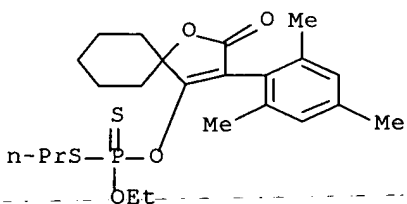
RN 148478-60-8 CAPLUS

CN Phosphoramidothioic acid, (1-methylethyl)-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



RN 148478-61-9 CAPLUS

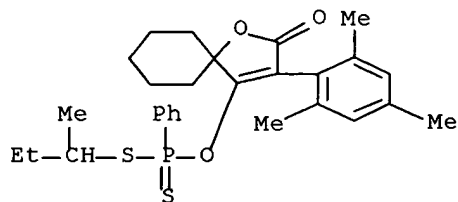
CN Phosphorodithioic acid, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] S-propyl ester (9CI) (CA INDEX NAME)



RN 148478-62-0 CAPLUS

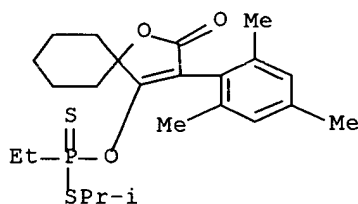
CN Phosphonodithioic acid, phenyl-, S-(1-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)

NAME)



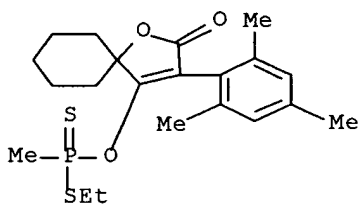
RN 148478-63-1 CAPLUS

CN Phosphonodithioic acid, ethyl-, S-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



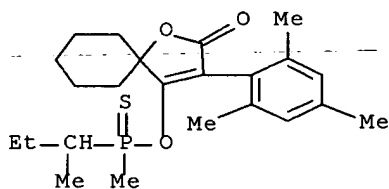
RN 148478-64-2 CAPLUS

CN Phosphonodithioic acid, methyl-, S-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



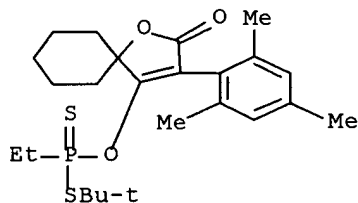
RN 148478-65-3 CAPLUS

CN Phosphinothioic acid, methyl(1-methylpropyl)-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



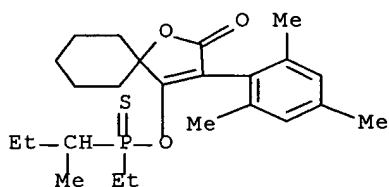
RN 148478-66-4 CAPLUS

CN Phosphonodithioic acid, ethyl-, S-(1,1-dimethylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



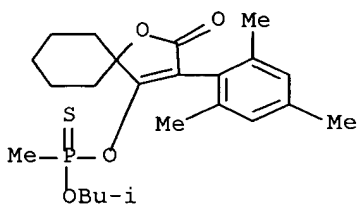
RN 148478-67-5 CAPLUS

CN Phosphinothioic acid, ethyl(1-methylpropyl)-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



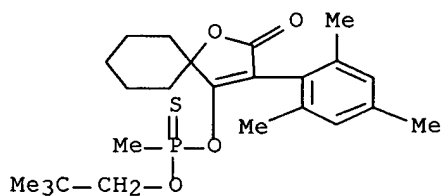
RN 148478-68-6 CAPLUS

CN Phosphonothioic acid, methyl-, O-(2-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



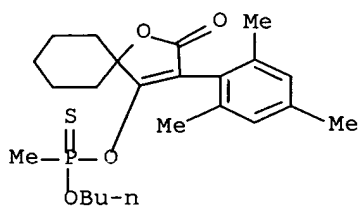
RN 148478-69-7 CAPLUS

CN Phosphonothioic acid, methyl-, O-(2,2-dimethylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



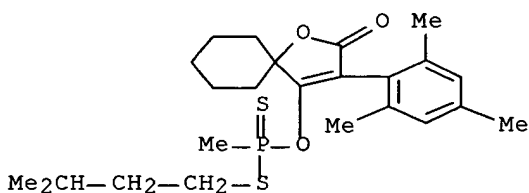
RN 148478-70-0 CAPLUS

CN Phosphonothioic acid, methyl-, O-butyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



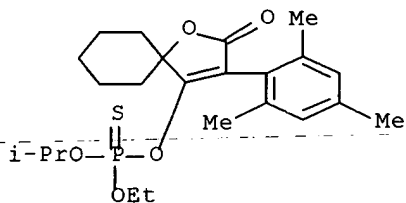
RN 148478-71-1 CAPLUS

CN. Phosphonodithioic acid, methyl-, S-(3-methylbutyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



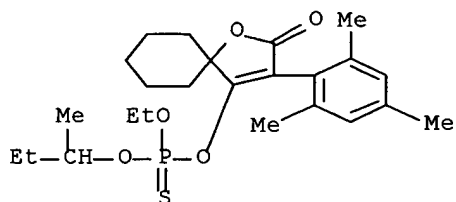
RN 148478-72-2 CAPLUS

CN Phosphorothioic acid, O-ethyl O-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



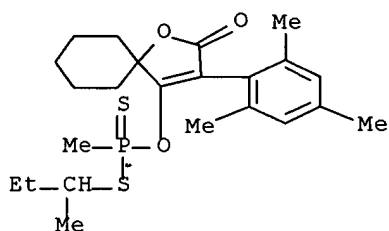
RN 148478-73-3 CAPLUS

CN Phosphorothioic acid, O-ethyl O-(1-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



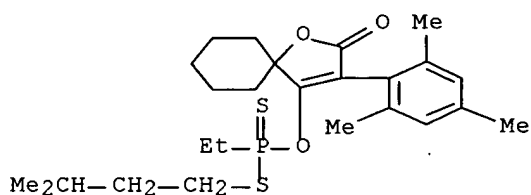
RN 148478-74-4 CAPLUS

CN Phosphonodithioic acid, methyl-, S-(1-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



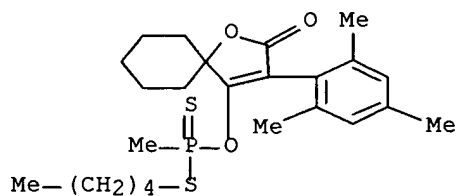
RN 148478-75-5 CAPLUS

CN Phosphonodithioic acid, ethyl-, S-(3-methylbutyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)

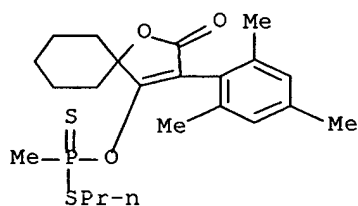


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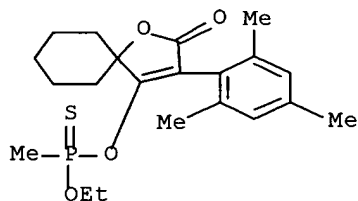
CN Phosphonodithioic acid, methyl-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] S-pentyl ester (9CI) (CA INDEX NAME)



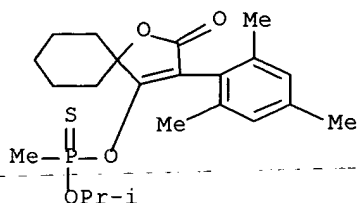
RN 148478-77-7 CAPLUS  
 CN Phosphonodithioic acid, methyl-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] S-propyl ester (9CI) (CA INDEX NAME)



RN 148478-78-8 CAPLUS  
 CN Phosphonothioic acid, methyl-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)

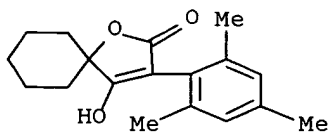


RN 148478-79-9 CAPLUS  
 CN Phosphonothioic acid, methyl-, O-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



RN 148478-81-3 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)-,

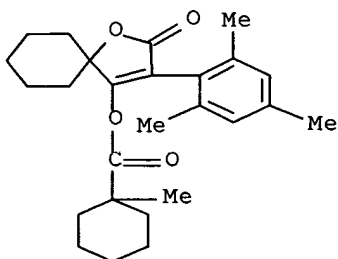
sodium salt (9CI) (CA INDEX NAME)



● Na

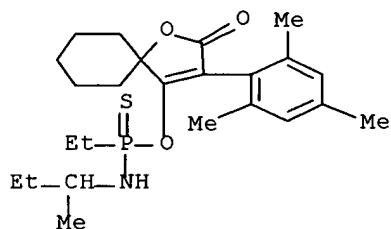
RN 148504-63-6 CAPLUS

CN Cyclohexanecarboxylic acid, 1-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



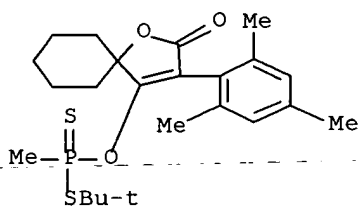
RN 148504-64-7 CAPLUS

CN Phosphonamidithioic acid, P-ethyl-N-(1-methylpropyl)-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)

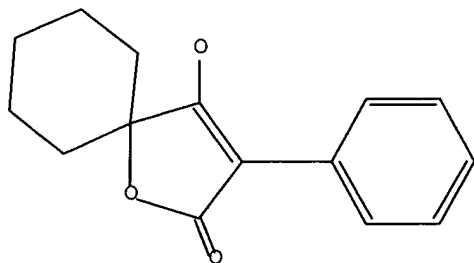


RN 148504-65-8 CAPLUS

CN Phosphonodithioic acid, methyl-, S-(1,1-dimethylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



=> d l1; d his; log y  
L1 HAS NO ANSWERS  
L1 STR



Structure attributes must be viewed using STN Express query preparation.

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L3 410 S L1 FUL  
L4 STRUCTURE UPLOADED  
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L6 24 S L3

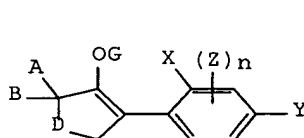
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
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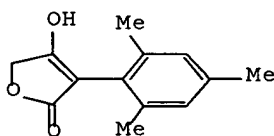


L9 ANSWER 63 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1993:517088 CAPLUS  
 DN 119:117088  
 TI Preparation and insecticidal, acaricidal, herbicidal, and fungicidal activities of 3-aryl-4-hydroxy-.DELTA.3-dihydrofuranone and -thiophenone derivatives  
 IN Fischer, Reiner; Bretschneider, Thomas; Krueger, Bernd Wieland; Bachmann, Juergen; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Santel, Hans Joachim; Luerksen, Klaus; Schmidt, Robert R.  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 96 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4216814	A1	19930121	DE 1992-4216814	19920521
	EP 528156	A1	19930224	EP 1992-111324	19920703
	EP 528156	B1	19970326		
	R: BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, PT				
	ES 2099770	T3	19970601	ES 1992-111324	19920703
	US 5262383	A	19931116	US 1992-909939	19920707
	AU 9219599	A1	19930121	AU 1992-19599	19920710
	AU 645701	B2	19940120		
	JP 05294953	A2	19931109	JP 1992-206261	19920710
	JP 3113078	B2	20001127		
	BR 9202653	A	19930316	BR 1992-2653	19920713
	ZA 9205260	A	19930428	ZA 1992-5260	19920715
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GI					



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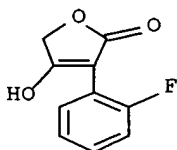
II

AB The prepn. of title compds. I, (X = alkyl, halo, alkoxy, haloalkyl; Y = H, alkyl, halo, alkoxy, haloalkyl; Z = alkyl, halo, alkoxy, n = 0-3; G = H, acyl, alkenylalkyl, organosulfonyl, organophosphonyl, diorganoaminoalkenylalkyl; A, B = H, halo substituted alkyl, alkenyl, alkynyl, alkoxyalkyl, alkylthioalkyl, cycloalkyl, etc.; D = O, S), as insecticide, acaricide, herbicide, and fungicide is claimed. - Thus, -  
 KOCMe3-mediated cyclization of methoxycarbonylmethyl 2,4,6-trimethylphenylacetate in Me3COH gave furanone deriv. II.  
 IT 100074-44-0P 148140-58-3P 148140-59-4P

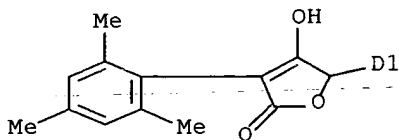
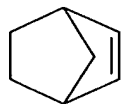
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RL: BAC (Biological activity or effector, except adverse); BSU  
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 study); PREP (Preparation)  
 (prepn. and biol. activity of)  
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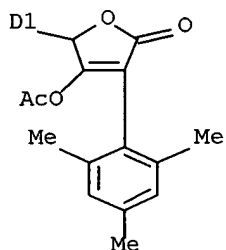
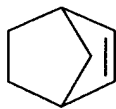


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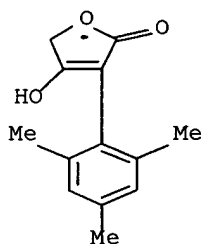
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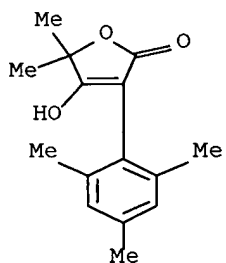
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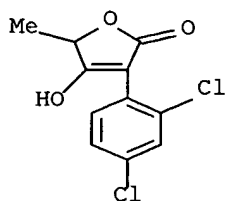
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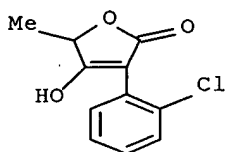
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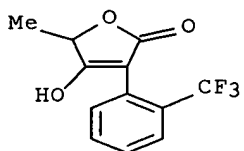
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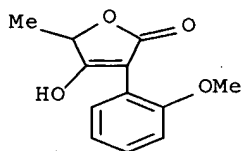
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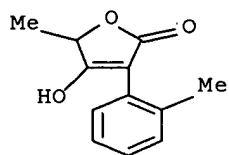
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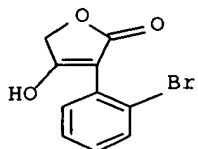


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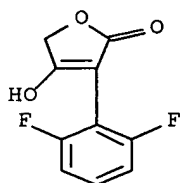
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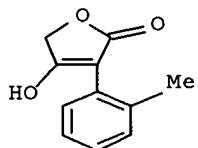
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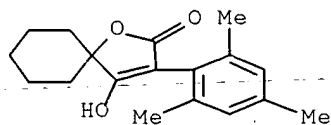
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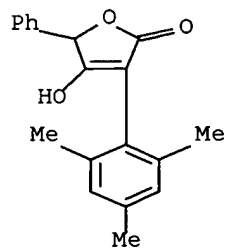


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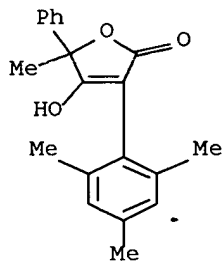
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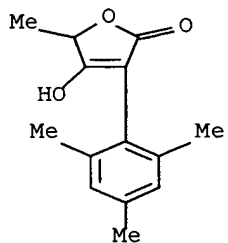
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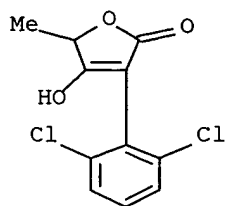
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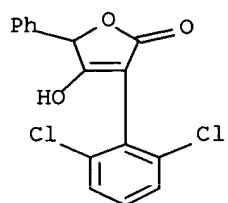
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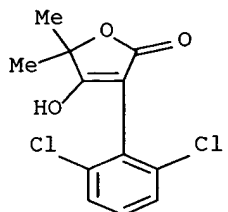
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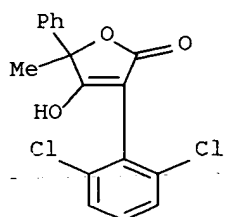
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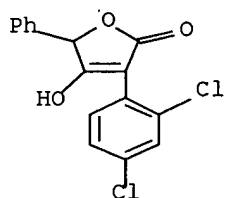


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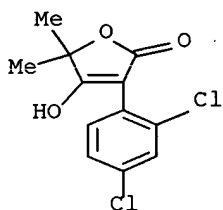
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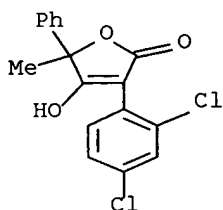
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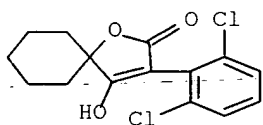
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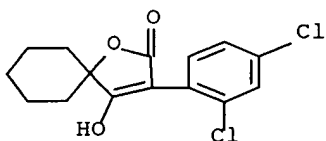


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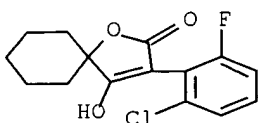
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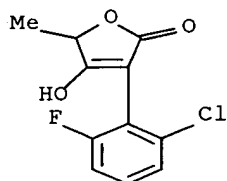
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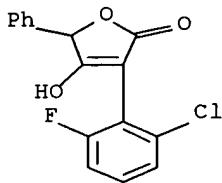
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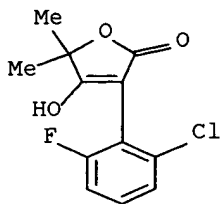
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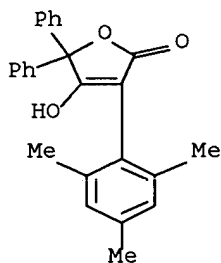
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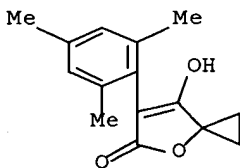
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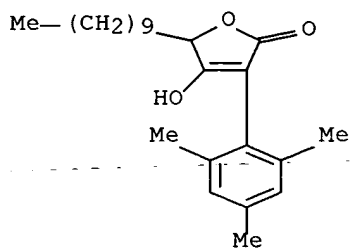
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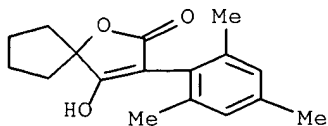
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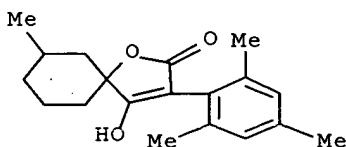


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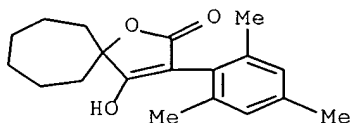
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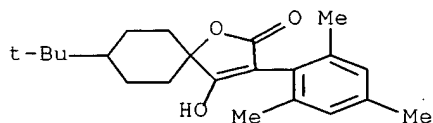
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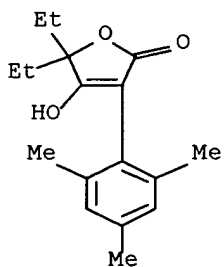
RN 148476-32-8 CAPLUS  
CN 1-Oxaspiro[4.6]undec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)



RN 148476-33-9 CAPLUS  
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 8-(1,1-dimethylethyl)-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

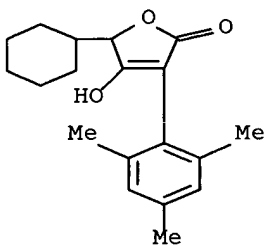


RN 148476-34-0 CAPLUS  
CN 2(5H)-Furanone, 5,5-diethyl-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI)  
(CA INDEX NAME)



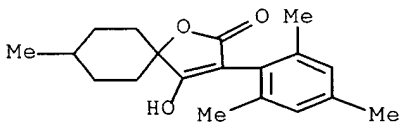
RN 148476-35-1 CAPLUS

CN 2(5H)-Furanone, 5-cyclohexyl-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI)  
(CA INDEX NAME)



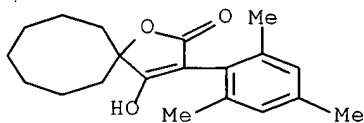
RN 148476-36-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



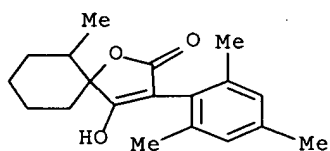
RN 148476-37-3 CAPLUS

CN 1-Oxaspiro[4.7]dodec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



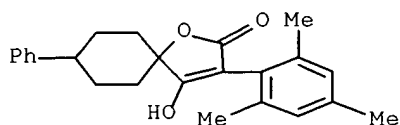
RN 148476-38-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-6-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



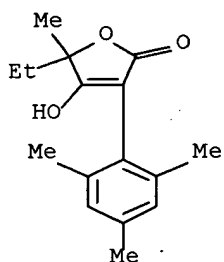
RN 148476-39-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-phenyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



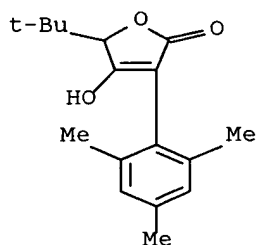
RN 148476-40-8 CAPLUS

CN 2(5H)-Furanone, 5-ethyl-4-hydroxy-5-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



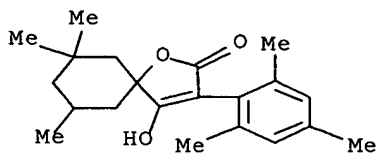
RN 148476-41-9 CAPLUS

CN 2(5H)-Furanone, 5-(1,1-dimethylethyl)-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

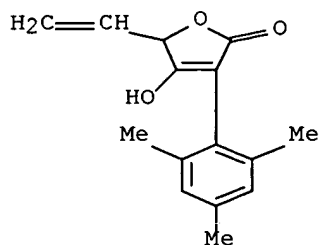


RN 148476-42-0 CAPLUS

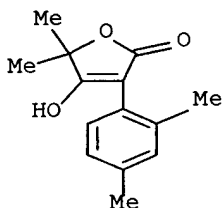
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-7,7,9-trimethyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



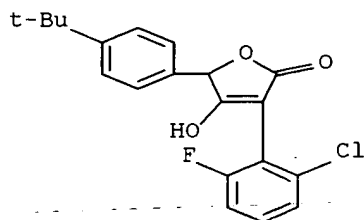
RN 148476-43-1 CAPLUS  
 CN 2(5H)-Furanone, 5-ethenyl-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI)  
 (CA INDEX NAME)



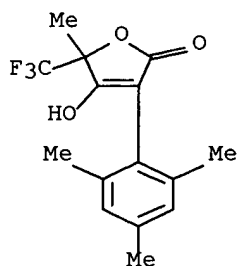
RN 148476-44-2 CAPLUS  
 CN 2(5H)-Furanone, 3-(2,4-dimethylphenyl)-4-hydroxy-5,5-dimethyl- (9CI)  
 (CA INDEX NAME)



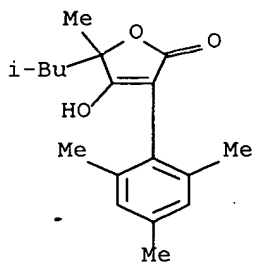
RN 148476-45-3 CAPLUS  
 CN 2(5H)-Furanone, 3-(2-chloro-6-fluorophenyl)-5-[4-(1,1-dimethylethyl)phenyl]-4-hydroxy- (9CI) (CA INDEX NAME)



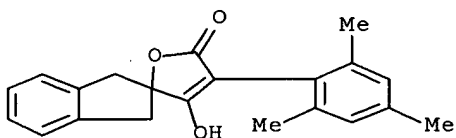
RN 148476-46-4 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-5-methyl-5-(trifluoromethyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 148476-47-5 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-5-methyl-5-(2-methylpropyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

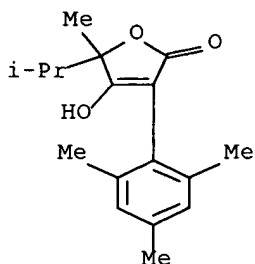


RN 148476-48-6 CAPLUS  
 CN Spiro[furan-2(5H),2'-[2H]inden]-5-one, 1',3'-dihydro-3-hydroxy-4-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



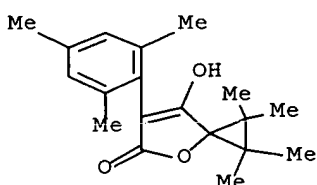
RN 148476-49-7 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-5-methyl-5-(1-methylethyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)





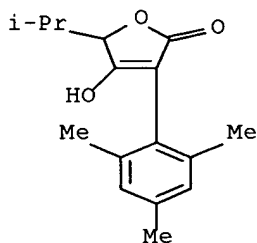
RN 148476-50-0 CAPLUS

CN 4-Oxaspiro[2.4]hept-6-en-5-one, 7-hydroxy-1,1,2,2-tetramethyl-6-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



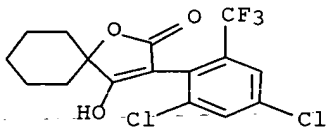
RN 148476-51-1 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-5-(1-methylethyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



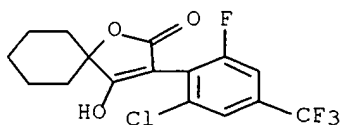
RN 148476-52-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-[2,4-dichloro-6-(trifluoromethyl)phenyl]-4-hydroxy- (9CI) (CA INDEX NAME)



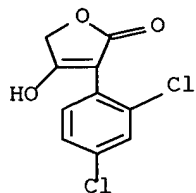
RN 148476-53-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-[2-chloro-6-fluoro-4-(trifluoromethyl)phenyl]-4-hydroxy- (9CI) (CA INDEX NAME)



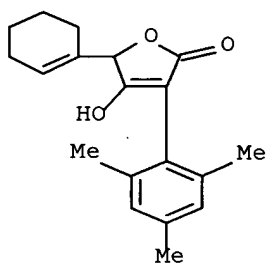
RN 148476-54-4 CAPLUS

CN 2(5H)-Furanone, 3-(2,4-dichlorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



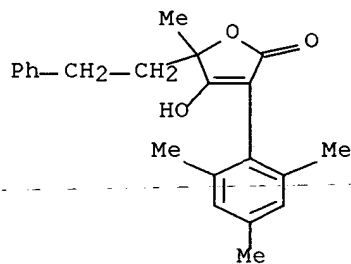
RN 148476-55-5 CAPLUS

CN 2(5H)-Furanone, 5-(1-cyclohexen-1-yl)-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



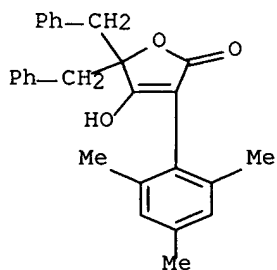
RN 148476-56-6 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-5-methyl-5-(2-phenylethyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



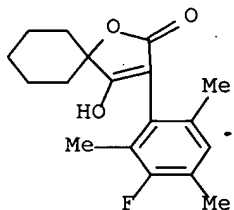
RN 148476-57-7 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-5,5-bis(phenylmethyl)-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)



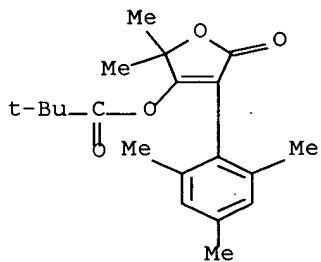
RN 148476-58-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(3-fluoro-2,4,6-trimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



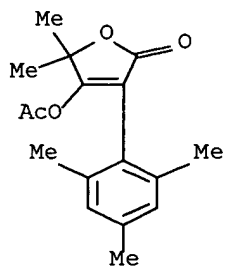
RN 148476-59-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)

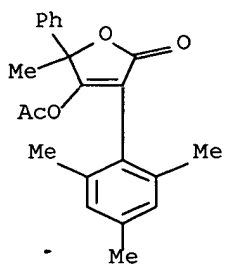


RN 148476-60-2 CAPLUS

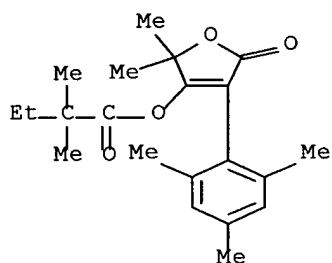
CN 2(5H)-Furanone, 4-(acetyloxy)-5,5-dimethyl-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)



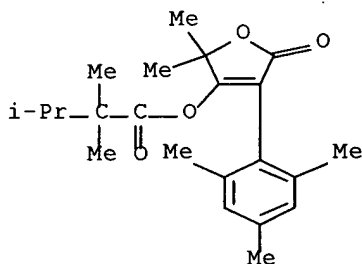
RN 148476-61-3 CAPLUS  
 CN 2(5H)-Furanone, 4-(acetyloxy)-5-methyl-5-phenyl-3-(2,4,6-trimethylphenyl)-  
 (9CI) (CA INDEX NAME)



RN 148476-62-4 CAPLUS  
 CN Butanoic acid, 2,2-dimethyl-, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)

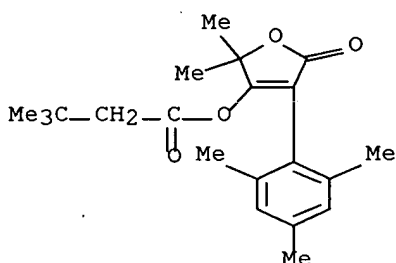


RN 148476-63-5 CAPLUS  
 CN Butanoic acid, 2,2,3-trimethyl-, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



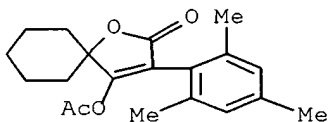
RN 148476-64-6 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



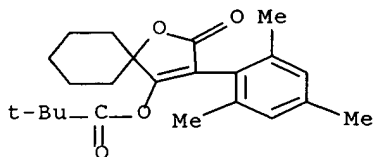
RN 148476-65-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



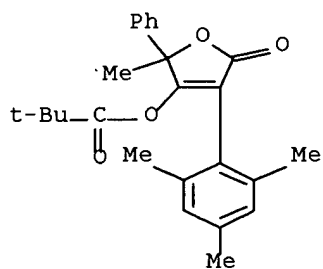
RN 148476-66-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



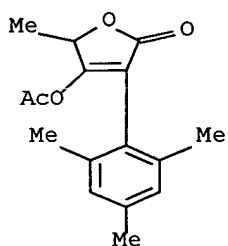
RN 148476-67-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-2-methyl-5-oxo-2-phenyl-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



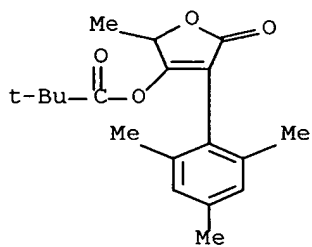
RN 148476-68-0 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5-methyl-3-(2,4,6-trimethylphenyl)- (9CI)  
(CA INDEX NAME)



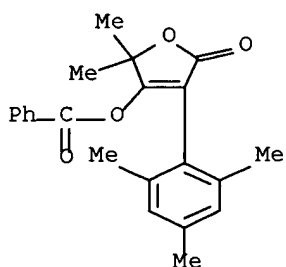
RN 148476-69-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-2-methyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



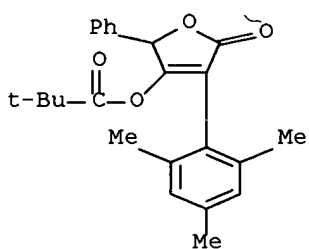
RN 148476-70-4 CAPLUS

CN 2(5H)-Furanone, 4-(benzoyloxy)-5,5-dimethyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



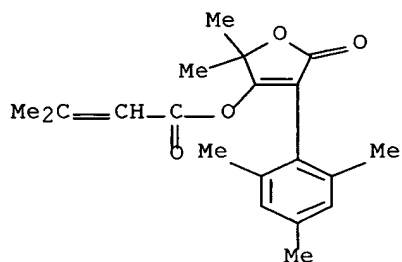
RN 148476-71-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-5-oxo-2-phenyl-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



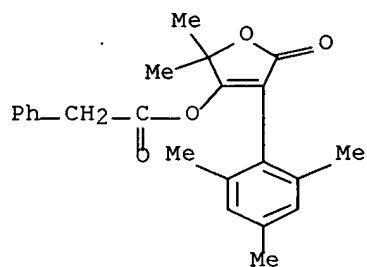
RN 148476-72-6 CAPLUS

CN 2-Butenoic acid, 3-methyl-, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



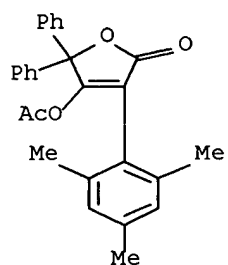
RN 148476-73-7 CAPLUS

CN Benzeneacetic acid, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



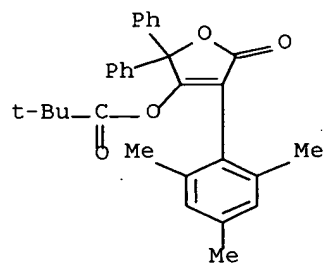
RN 148476-74-8 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5,5-diphenyl-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)



RN 148476-75-9 CAPLUS

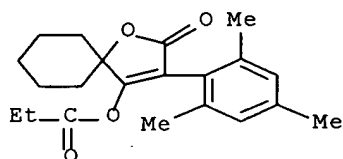
CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-5-oxo-2,2-diphenyl-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



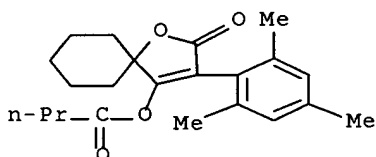
RN 148476-76-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(1-oxopropoxy)-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)

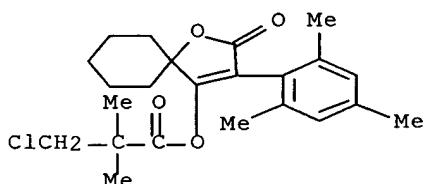




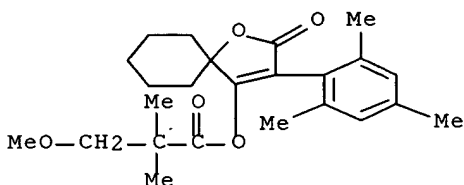
RN 148476-77-1 CAPLUS  
 CN Butanoic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



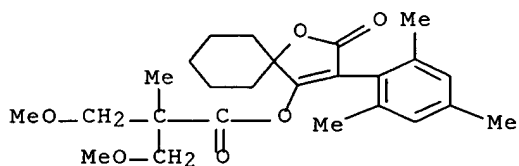
RN 148476-78-2 CAPLUS  
 CN Propanoic acid, 3-chloro-2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148476-79-3 CAPLUS  
 CN Propanoic acid, 3-methoxy-2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

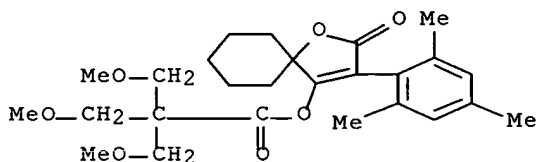


RN 148476-80-6 CAPLUS  
 CN Propanoic acid, 3-methoxy-2-(methoxymethyl)-2-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



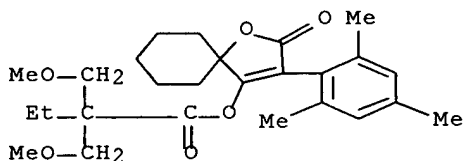
RN 148476-81-7 CAPLUS

CN Propanoic acid, 3-methoxy-2,2-bis(methoxymethyl)-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



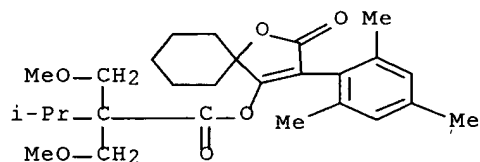
RN 148476-82-8 CAPLUS

CN Butanoic acid, 2,2-bis(methoxymethyl)-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



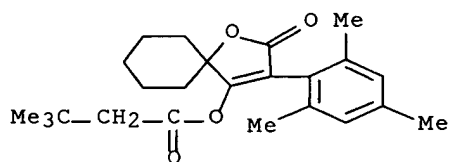
RN 148476-83-9 CAPLUS

CN Butanoic acid, 2,2-bis(methoxymethyl)-3-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



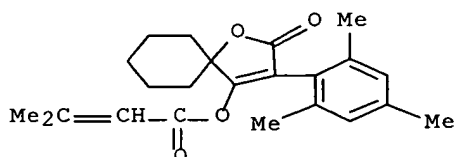
RN 148476-84-0 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



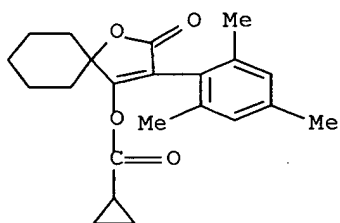
RN 148476-85-1 CAPLUS

CN 2-Butenoic acid, 3-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



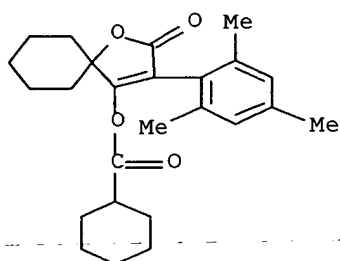
RN 148476-86-2 CAPLUS

CN Cyclopropanecarboxylic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



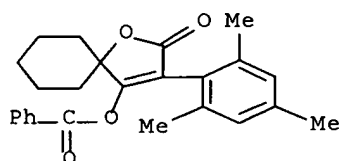
RN 148476-87-3 CAPLUS

CN Cyclohexanecarboxylic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148476-88-4 CAPLUS

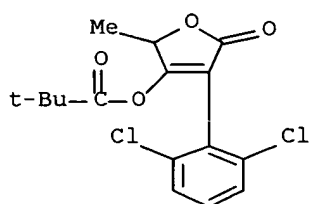
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(benzoyloxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 148476-89-5 CAPLUS

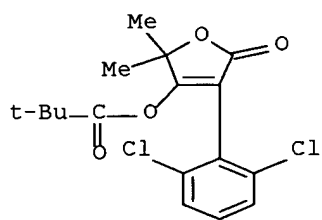
CN Propanoic acid, 2,2-dimethyl-, 4-(2,6-dichlorophenyl)-2,5-dihydro-2-methyl-

5-oxo-3-furanyl ester (9CI) (CA INDEX NAME)



RN 148476-90-8 CAPLUS

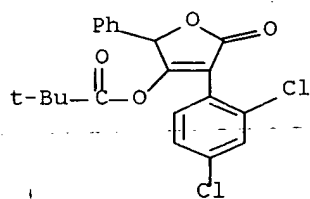
CN Propanoic acid, 2,2-dimethyl-, 4-(2,6-dichlorophenyl)-2,5-dihydro-2,2-dimethyl-5-oxo-3-furanyl ester (9CI) (CA INDEX NAME)



RN 148476-91-9 CAPLUS

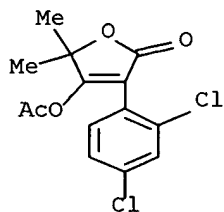
CN Propanoic acid, 2,2-dimethyl-, 4-(2,4-dichlorophenyl)-2,5-dihydro-5-oxo-2-

phenyl-3-furanyl ester (9CI) (CA INDEX NAME)

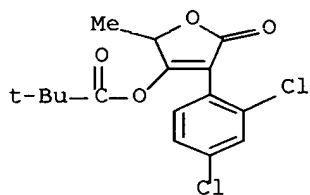


RN 148476-92-0 CAPLUS

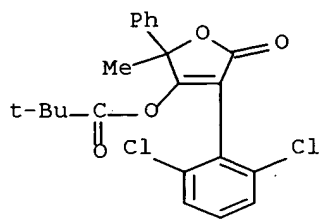
CN 2(5H)-Furanone, 4-(acetyloxy)-3-(2,4-dichlorophenyl)-5,5-dimethyl- (9CI)  
(CA INDEX NAME)



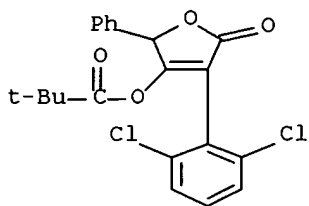
RN 148476-93-1 CAPLUS  
CN Propanoic acid, 2,2-dimethyl-, 4-(2,4-dichlorophenyl)-2,5-dihydro-2-methyl-  
5-oxo-3-furanyl ester (9CI) (CA INDEX NAME)



RN 148476-94-2 CAPLUS  
CN Propanoic acid, 2,2-dimethyl-, 4-(2,6-dichlorophenyl)-2,5-dihydro-2-methyl-  
5-oxo-2-phenyl-3-furanyl ester (9CI) (CA INDEX NAME)



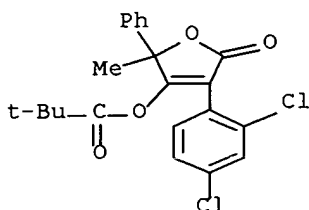
RN 148476-95-3 CAPLUS  
CN Propanoic acid, 2,2-dimethyl-, 4-(2,6-dichlorophenyl)-2,5-dihydro-5-oxo-2-  
phenyl-3-furanyl ester (9CI) (CA INDEX NAME)



RN 148476-96-4 CAPLUS

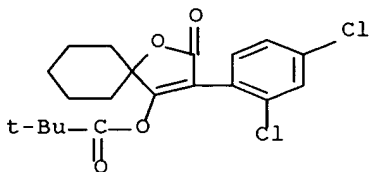
CN Propanoic acid, 2,2-dimethyl-, 4-(2,4-dichlorophenyl)-2,5-dihydro-2-methyl-

5-oxo-2-phenyl-3-furanyl ester (9CI) (CA INDEX NAME)



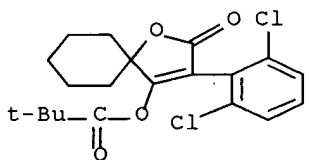
RN 148476-97-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



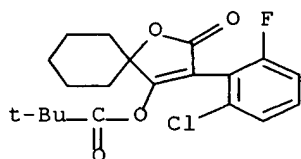
RN 148476-98-6 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



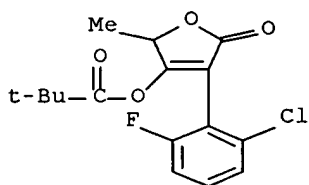
RN 148476-99-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-chloro-6-fluorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



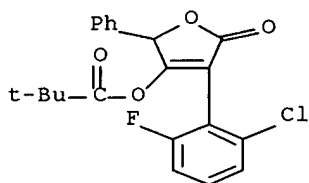
RN 148477-00-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-(2-chloro-6-fluorophenyl)-2,5-dihydro-2-methyl-5-oxo-3-furanyl ester (9CI) (CA INDEX NAME)



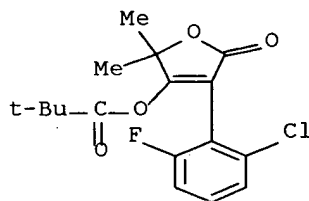
RN 148477-01-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-(2-chloro-6-fluorophenyl)-2,5-dihydro-5-oxo-2-phenyl-3-furanyl ester (9CI) (CA INDEX NAME)



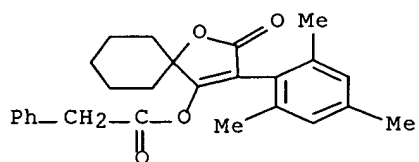
RN 148477-03-6 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-(2-chloro-6-fluorophenyl)-2,5-dihydro-2,2-dimethyl-5-oxo-3-furanyl ester (9CI) (CA INDEX NAME)



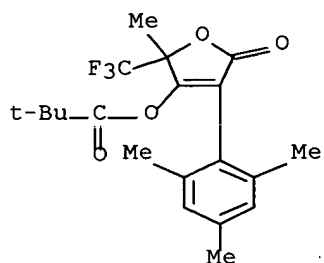
RN 148477-04-7 CAPLUS

CN Benzeneacetic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



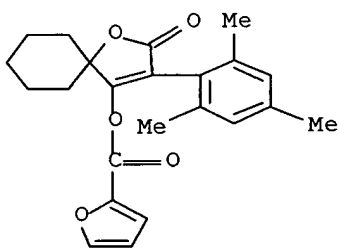
RN 148477-05-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-2-methyl-5-oxo-2-(trifluoromethyl)-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



RN 148477-06-9 CAPLUS

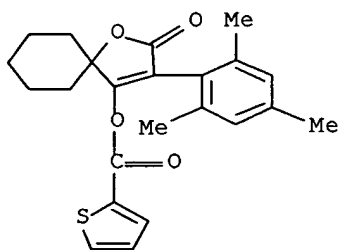
CN 2-Furancarboxylic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-07-0 CAPLUS

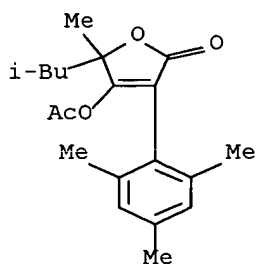
CN 2-Thiophenecarboxylic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





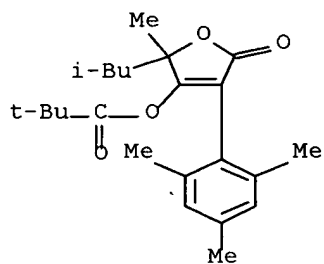
RN 148477-08-1 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5-methyl-5-(2-methylpropyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



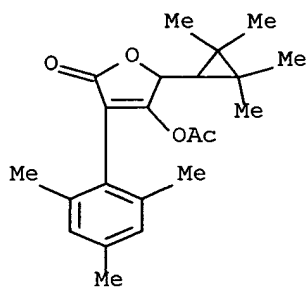
RN 148477-09-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-2-methyl-2-(2-methylpropyl)-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



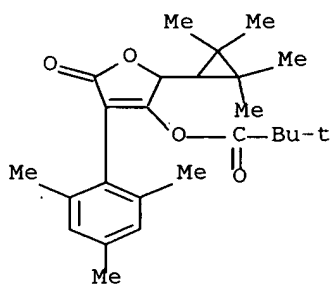
RN 148477-10-5 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5-(2,2,3,3-tetramethylcyclopropyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



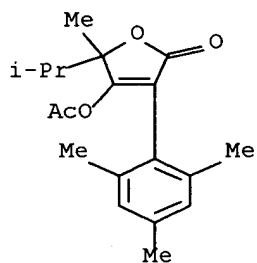
RN 148477-11-6 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-5-oxo-2-(2,2,3,3-tetramethylcyclopropyl)-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI)  
(CA INDEX NAME)



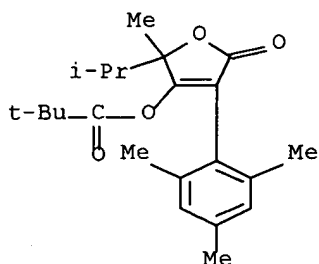
RN 148477-12-7 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5-methyl-5-(1-methylethyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



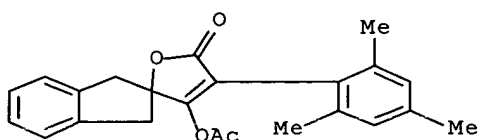
RN 148477-13-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-2-methyl-2-(1-methylethyl)-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



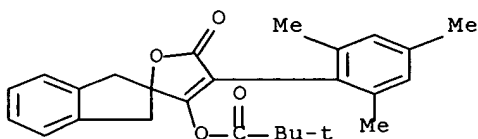
RN 148477-14-9 CAPLUS

CN Spiro[furan-2(5H),2'-[2H]inden]-5-one, 3-(acetyloxy)-1',3'-dihydro-4-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



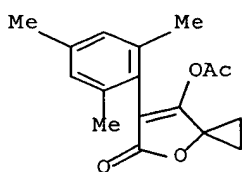
RN 148477-15-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 1',3'-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)spiro[furan-2(5H),2'-[2H]inden]-3-yl ester (9CI) (CA INDEX NAME)



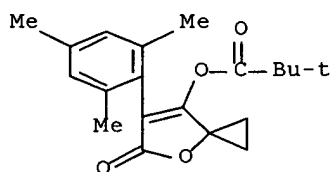
RN 148477-16-1 CAPLUS

CN 4-Oxaspiro[2.4]hept-6-en-5-one, 7-(acetyloxy)-6-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



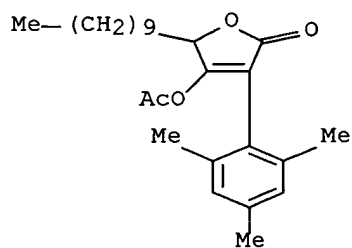
RN 148477-17-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 5-oxo-6-(2,4,6-trimethylphenyl)-4-oxaspiro[2.4]hept-6-en-7-yl ester (9CI) (CA INDEX NAME)



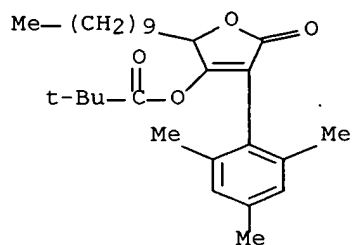
RN 148477-18-3 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5-decyl-3-(2,4,6-trimethylphenyl)- (9CI)  
(CA INDEX NAME)



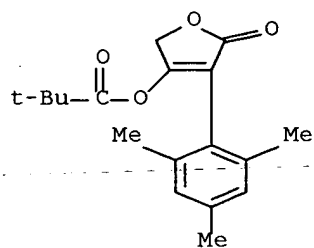
RN 148477-19-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-decyl-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) .(CA INDEX NAME)



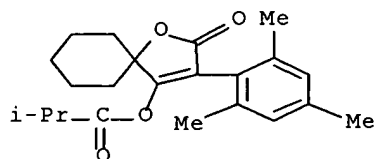
RN 148477-20-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



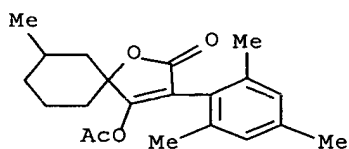
RN 148477-21-8 CAPLUS

CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



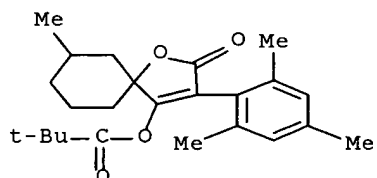
RN 148477-22-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-7-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



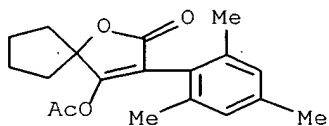
RN 148477-23-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 7-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



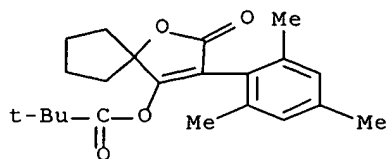
RN 148477-24-1 CAPLUS

CN 1-Oxaspiro[4.4]non-3-en-2-one, 4-(acetyloxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



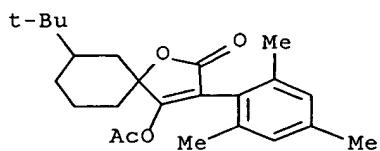
RN 148477-25-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



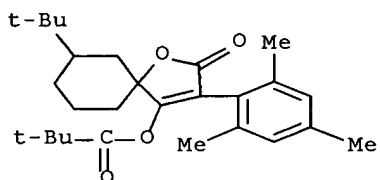
RN 148477-26-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-7-(1,1-dimethylethyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



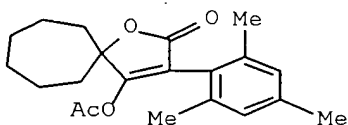
RN 148477-27-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 7-(1,1-dimethylethyl)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



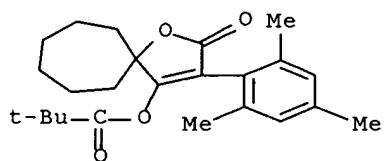
RN 148477-28-5 CAPLUS

CN 1-Oxaspiro[4.6]undec-3-en-2-one, 4-(acetyloxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 148477-29-6 CAPLUS

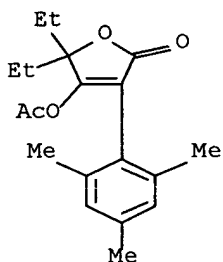
CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.6]undec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-30-9 CAPLUS

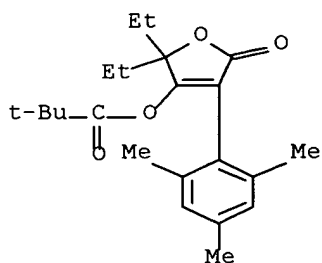
CN 2(5H)-Furanone, 4-(acetyloxy)-5,5-diethyl-3-(2,4,6-trimethylphenyl)-  
(9CI)

(CA INDEX NAME)



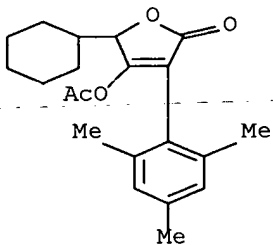
RN 148477-31-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,2-diethyl-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



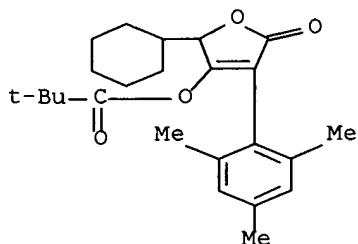
RN 148477-32-1 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5-cyclohexyl-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)



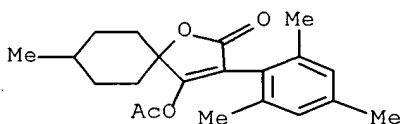
RN 148477-33-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-cyclohexyl-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



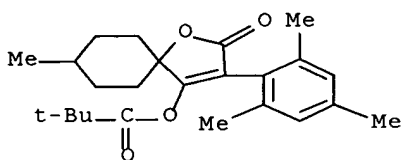
RN 148477-34-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-8-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 148477-35-4 CAPLUS

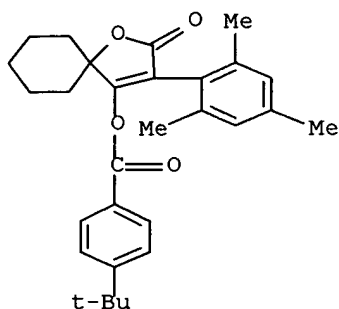
CN Propanoic acid, 2,2-dimethyl-, 8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



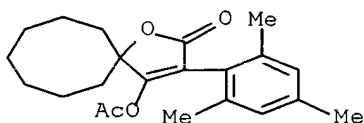
RN 148477-36-5 CAPLUS

CN Benzoic acid, 4-(1,1-dimethylethyl)-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

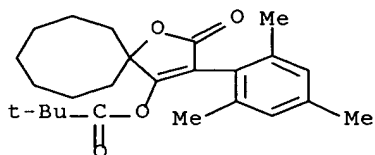




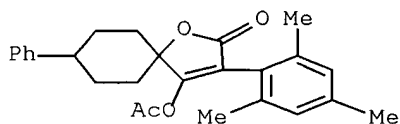
RN 148477-37-6 CAPLUS  
 CN 1-Oxaspiro[4.7]dodec-3-en-2-one, 4-(acetyloxy)-3-(2,4,6-trimethylphenyl)-  
 (9CI) (CA INDEX NAME)



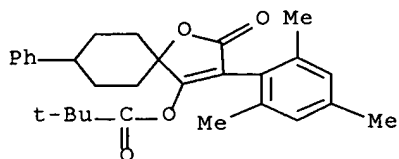
RN 148477-38-7 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.7]dodec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-39-8 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-8-phenyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

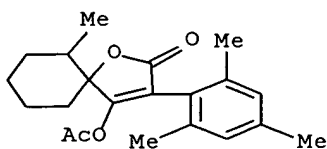


RN 148477-40-1 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 2-oxo-8-phenyl-3-(2,4,6-trimethylphenyl)-  
 1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



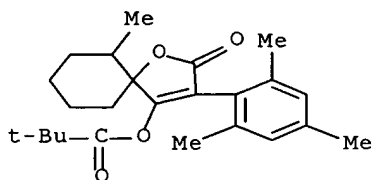
RN 148477-41-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-6-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



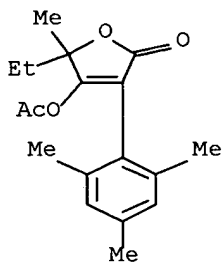
RN 148477-42-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 6-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



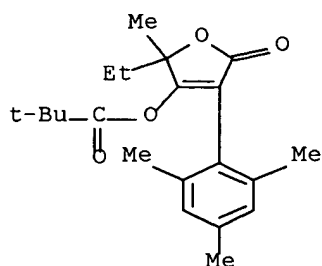
RN 148477-43-4 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5-ethyl-5-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



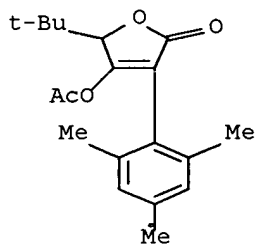
RN 148477-44-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-ethyl-2,5-dihydro-2-methyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



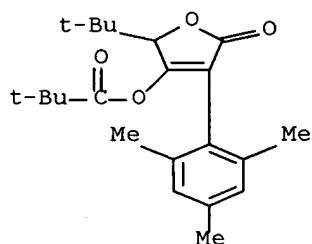
RN 148477-45-6 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5-(1,1-dimethylethyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



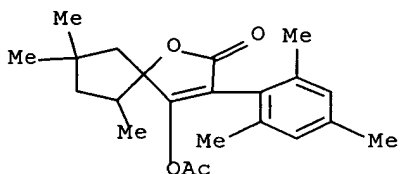
RN 148477-46-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-(1,1-dimethylethyl)-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



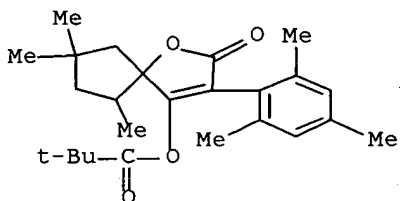
RN 148477-47-8 CAPLUS

CN 1-Oxaspiro[4.4]non-3-en-2-one, 4-(acetyloxy)-7,7,9-trimethyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



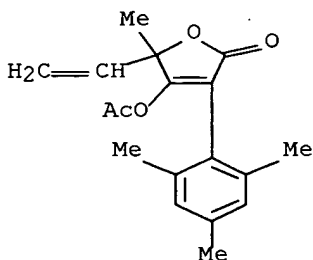
RN 148477-48-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 7,7-dimethyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



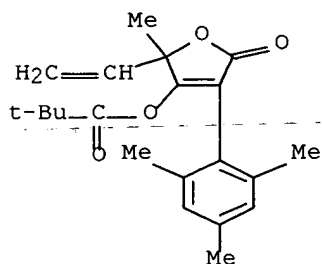
RN 148477-49-0 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-5-ethenyl-5-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

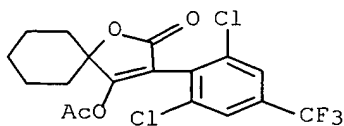


RN 148477-50-3 CAPLUS

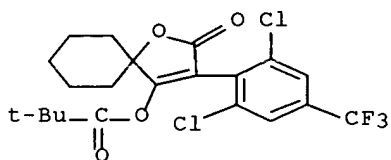
CN Propanoic acid, 2,2-dimethyl-, 2-ethenyl-2,5-dihydro-2-methyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



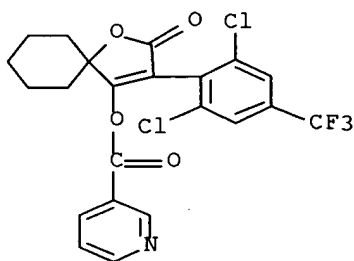
RN 148477-51-4 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-[2,6-dichloro-4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



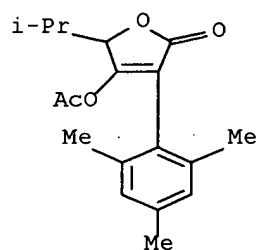
RN 148477-52-5 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 3-[2,6-dichloro-4-(trifluoromethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-53-6 CAPLUS  
 CN 3-Pyridinecarboxylic acid, 3-[2,6-dichloro-4-(trifluoromethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

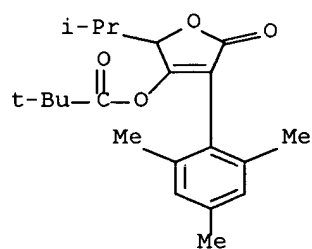


RN 148477-54-7 CAPLUS  
 CN 2(5H)-Furanone, 4-(acetyloxy)-5-(1-methylethyl)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



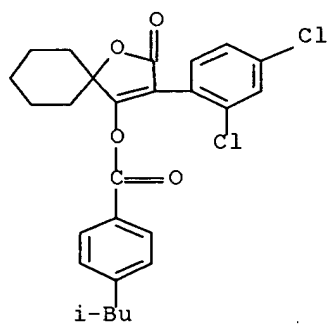
RN 148477-55-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-2-(1-methylethyl)-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



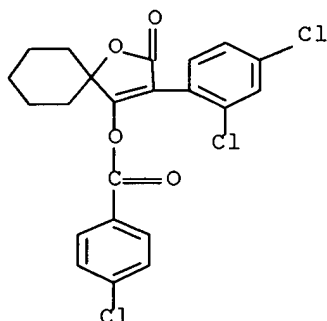
RN 148477-56-9 CAPLUS

CN Benzoic acid, 4-(2-methylpropyl)-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



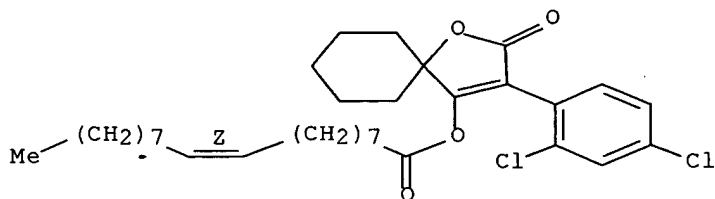
RN 148477-57-0 CAPLUS

CN Benzoic acid, 4-chloro-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

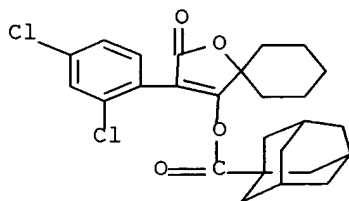


RN 148477-58-1 CAPLUS  
 CN 9-Octadecenoic acid (9Z)-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

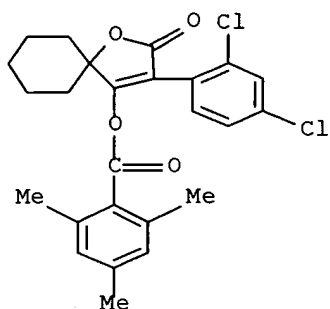
Double bond geometry as shown.



RN 148477-59-2 CAPLUS  
 CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-carboxylic acid, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

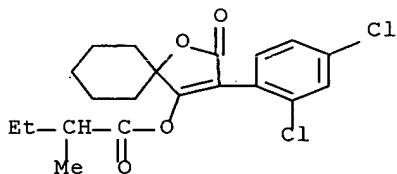


RN 148477-60-5 CAPLUS  
 CN Benzoic acid, 2,4,6-trimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



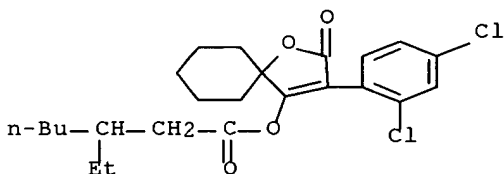
RN 148477-61-6 CAPLUS

CN Butanoic acid, 2-methyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



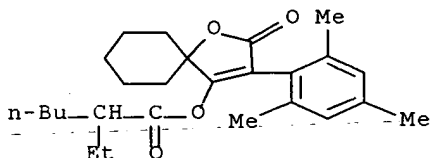
RN 148477-62-7 CAPLUS

CN Heptanoic acid, 3-ethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-63-8 CAPLUS

CN Hexanoic acid, 2-ethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

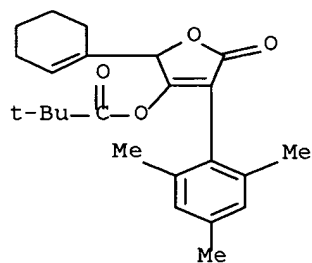


RN 148477-64-9 CAPLUS

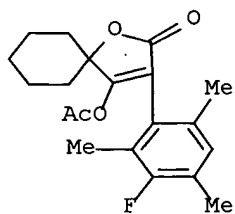
CN 2(5H)-Furanone, 4-(acetyloxy)-5-(1-cyclohexen-1-yl)-3-(2,4,6-



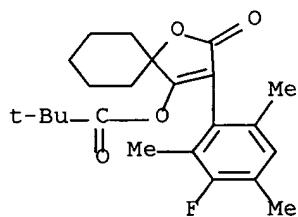
(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-(3-fluoro-2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

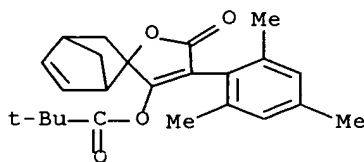


oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



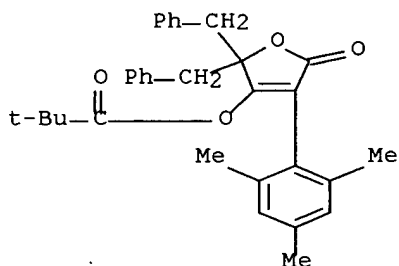
RN 148477-69-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]hept-5-ene-2,2'-(5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



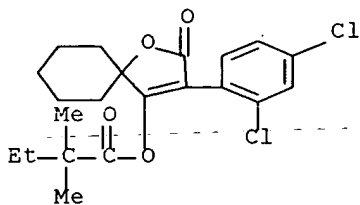
RN 148477-70-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2,5-dihydro-5-oxo-2,2-bis(phenylmethyl)-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



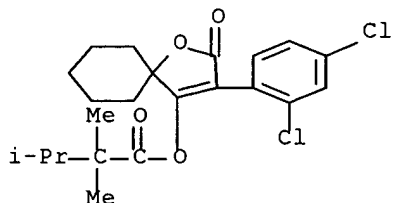
RN 148477-71-8 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



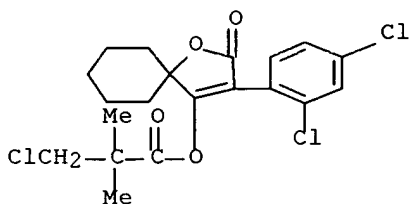
RN 148477-72-9 CAPLUS

CN Butanoic acid, 2,2,3-trimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



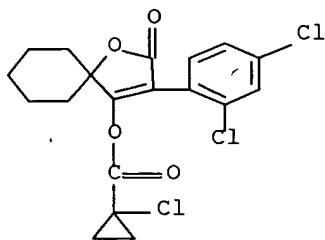
RN 148477-73-0 CAPLUS

CN Propanoic acid, 3-chloro-2,2-dimethyl-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



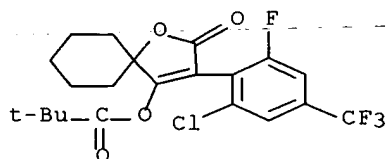
RN 148477-74-1 CAPLUS

CN Cyclopropanecarboxylic acid, 1-chloro-, 3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

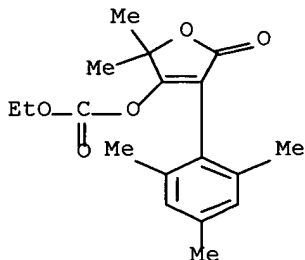


RN 148477-75-2 CAPLUS

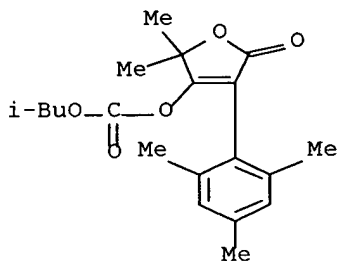
CN Propanoic acid, 2,2-dimethyl-, 3-[2-chloro-6-fluoro-4-(trifluoromethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



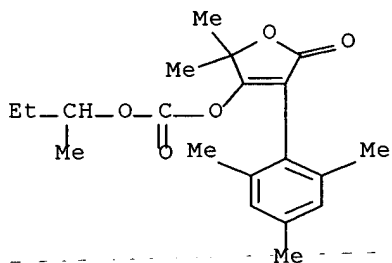
RN 148477-76-3 CAPLUS  
 CN Carbonic acid, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-  
 3-  
 furanyl ethyl ester (9CI) (CA INDEX NAME)



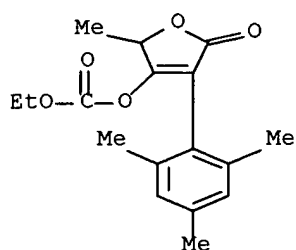
RN 148477-77-4 CAPLUS  
 CN Carbonic acid, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-  
 3-  
 furanyl 2-methylpropyl ester (9CI) (CA INDEX NAME)



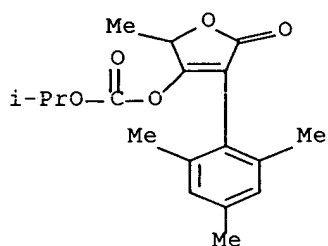
RN 148477-78-5 CAPLUS  
 CN Carbonic acid, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-  
 3-  
 furanyl 1-methylpropyl ester (9CI) (CA INDEX NAME)



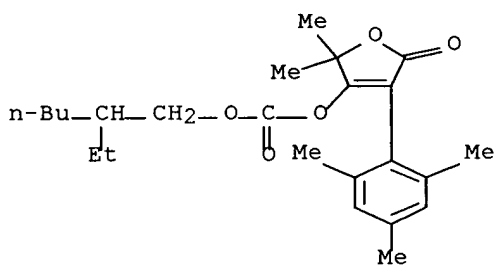
RN 148477-79-6 CAPLUS  
 CN Carbonic acid, 2,5-dihydro-2-methyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-  
 furanyl ethyl ester (9CI) (CA INDEX NAME)



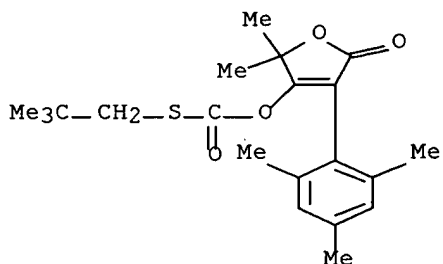
RN 148477-80-9 CAPLUS  
 CN Carbonic acid, 2,5-dihydro-2-methyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)



RN 148477-81-0 CAPLUS  
 CN Carbonic acid, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl 2-ethylhexyl ester (9CI) (CA INDEX NAME)

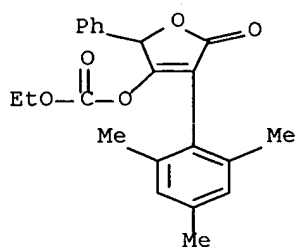


RN 148477-82-1 CAPLUS  
 CN Carbonothioic acid, O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] S-(2,2-dimethylpropyl) ester (9CI) (CA INDEX NAME)



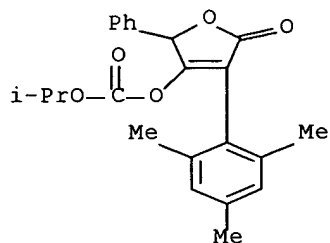
RN 148477-83-2 CAPLUS

CN Carbonic acid, 2,5-dihydro-5-oxo-2-phenyl-4-(2,4,6-trimethylphenyl)-3-furanyl ethyl ester (9CI) (CA INDEX NAME)



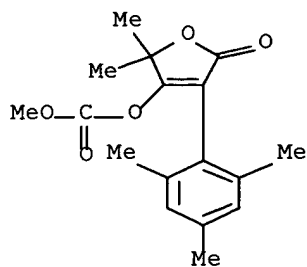
RN 148477-84-3 CAPLUS

CN Carbonic acid, 2,5-dihydro-5-oxo-2-phenyl-4-(2,4,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)

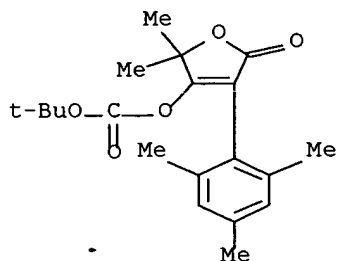


RN 148477-85-4 CAPLUS

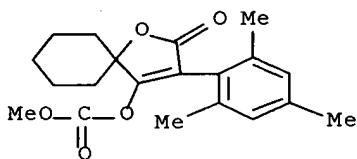
CN Carbonic acid, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl methyl ester (9CI) (CA INDEX NAME)



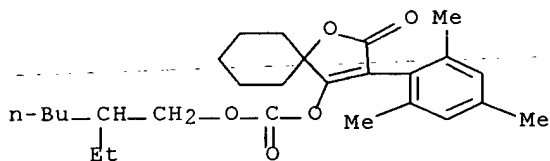
RN 148477-86-5 CAPLUS  
 CN Carbonic acid, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



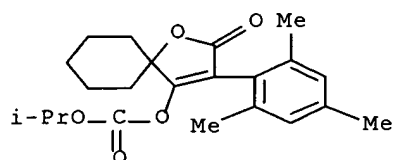
RN 148477-87-6 CAPLUS  
 CN Carbonic acid, methyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



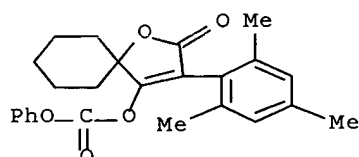
RN 148477-88-7 CAPLUS  
 CN Carbonic acid, 2-ethylhexyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



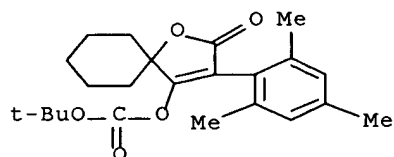
RN 148477-89-8 CAPLUS  
 CN Carbonic acid, 1-methylethyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



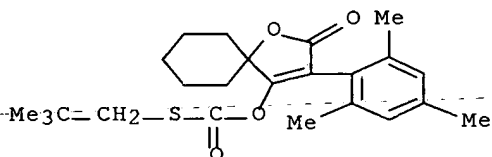
RN 148477-90-1 CAPLUS  
 CN Carbonic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl phenyl ester (9CI) (CA INDEX NAME)



RN 148477-91-2 CAPLUS  
 CN Carbonic acid, 1,1-dimethylethyl 3-oxo-4-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



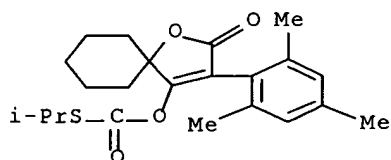
RN 148477-92-3 CAPLUS  
 CN Carbonothioic acid, S-(2,2-dimethylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-2-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



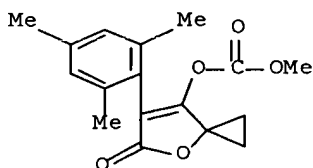
RN 148477-93-4 CAPLUS



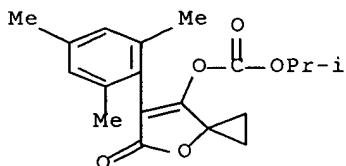
RN Carbonothioic acid, S-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



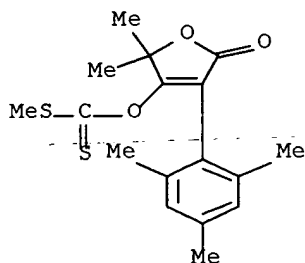
RN 148477-94-5 CAPLUS  
CN Carbonic acid, methyl 5-oxo-6-(2,4,6-trimethylphenyl)-4-oxaspiro[2.4]hept-6-en-7-yl ester (9CI) (CA INDEX NAME)



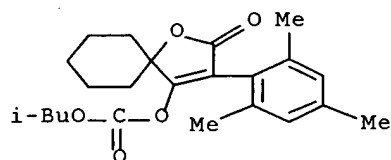
RN 148477-95-6 CAPLUS  
CN Carbonic acid, 1-methylethyl 5-oxo-6-(2,4,6-trimethylphenyl)-4-oxaspiro[2.4]hept-6-en-7-yl ester (9CI) (CA INDEX NAME)



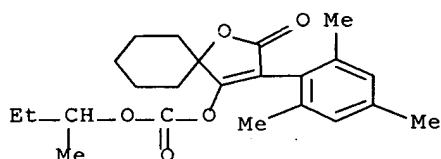
RN 148477-96-7 CAPLUS  
CN Carbonodithioic acid, O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] S-methyl ester (9CI) (CA INDEX NAME)



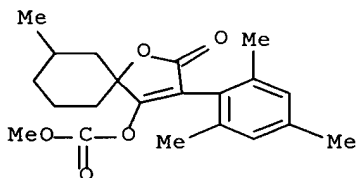
RN 148477-97-8 CAPLUS  
 CN Carbonic acid, 2-methylpropyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



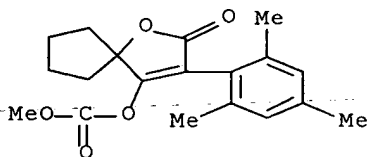
RN 148477-98-9 CAPLUS  
 CN Carbonic acid, 1-methylpropyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148477-99-0 CAPLUS  
 CN Carbonic acid, methyl 7-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

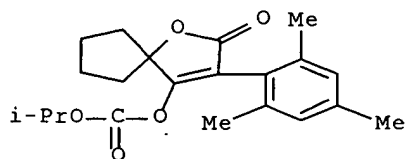


RN 148478-00-6 CAPLUS  
 CN Carbonic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



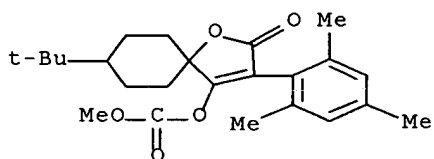
RN 148478-01-7 CAPLUS

CN Carbonic acid, 1-methylethyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



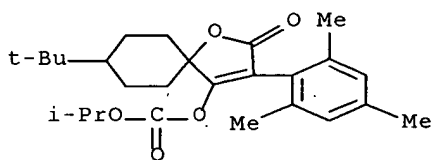
RN 148478-02-8 CAPLUS

CN Carbonic acid, 8-(1,1-dimethylethyl)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl methyl ester (9CI) (CA INDEX NAME)



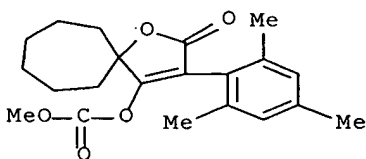
RN 148478-03-9 CAPLUS

CN Carbonic acid, 8-(1,1-dimethylethyl)-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



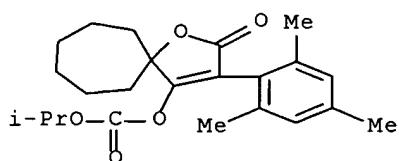
RN 148478-04-0 CAPLUS

CN Carbonic acid, methyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.6]undec-3-en-4-yl ester (9CI) (CA INDEX NAME)

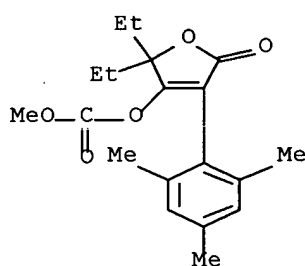


RN 148478-05-1 CAPLUS

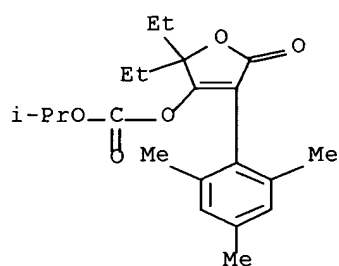
CN Carbonic acid, 1-methylethyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.6]undec-3-en-4-yl ester (9CI) (CA INDEX NAME)



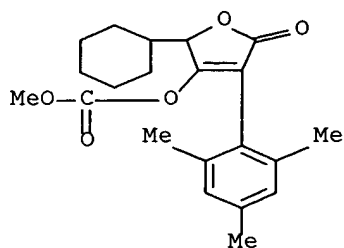
RN 148478-06-2 CAPLUS  
 CN Carbonic acid, 2,2-diethyl-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-  
 3-  
 furanyl methyl ester (9CI) (CA INDEX NAME)



RN 148478-07-3 CAPLUS  
 CN Carbonic acid, 2,2-diethyl-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-  
 3-  
 furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)

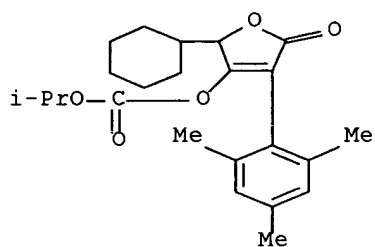


RN 148478-08-4 CAPLUS  
 CN Carbonic acid, 2-cyclohexyl-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-  
 3-  
 furanyl methyl ester (9CI) (CA INDEX NAME)



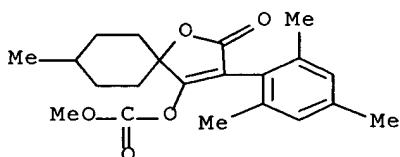
RN 148478-09-5 CAPLUS

CN Carbonic acid, 2-cyclohexyl-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)



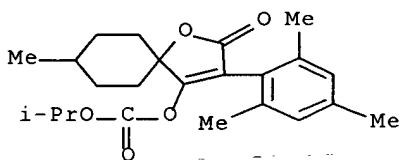
RN 148478-10-8 CAPLUS

CN Carbonic acid, methyl 8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148478-11-9 CAPLUS

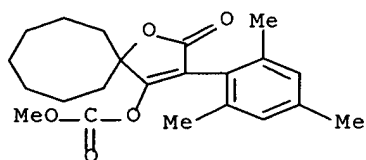
CN Carbonic acid, 1-methylethyl 8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148478-12-0 CAPLUS

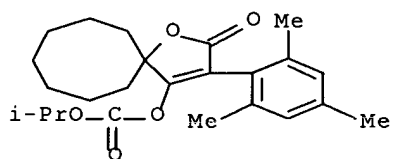
CN Carbonic acid, methyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.7]dodec-

3-en-4-yl ester (9CI) (CA INDEX NAME)



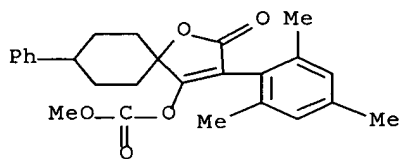
RN 148478-13-1 CAPLUS

CN Carbonic acid, 1-methylethyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.7]dodec-3-en-4-yl ester (9CI) (CA INDEX NAME)



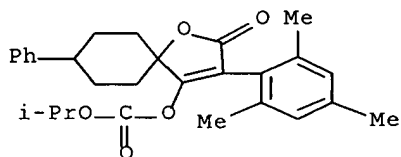
RN 148478-14-2 CAPLUS

CN Carbonic acid, methyl 2-oxo-8-phenyl-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



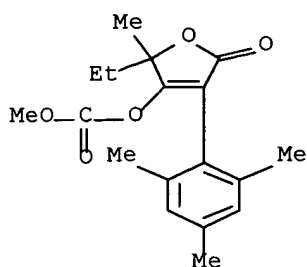
RN 148478-15-3 CAPLUS

CN Carbonic acid, 1-methylethyl 2-oxo-8-phenyl-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



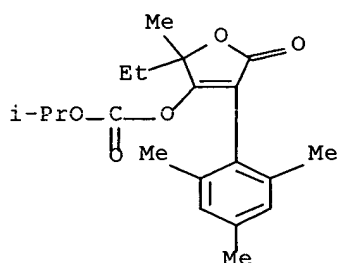
RN 148478-16-4 CAPLUS

CN Carbonic acid, 2-ethyl-2-methyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl methyl ester (9CI) (CA INDEX NAME)



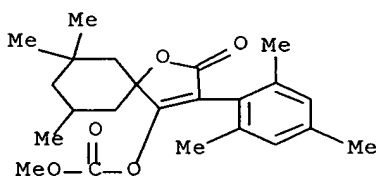
RN 148478-17-5 CAPLUS

CN Carbonic acid, 2-ethyl-2,5-dihydro-2-methyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)



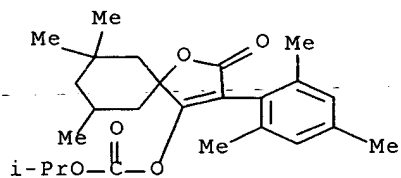
RN 148478-18-6 CAPLUS

CN Carbonic acid, methyl 7,7,9-trimethyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



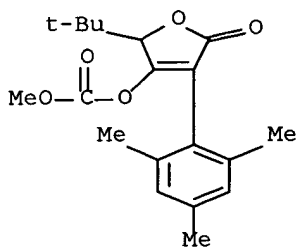
RN 148478-19-7 CAPLUS

CN Carbonic acid, 1-methylethyl 7,7,9-trimethyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



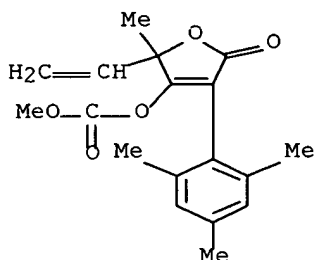
RN 148478-20-0 CAPLUS

CN Carbonic acid, 2-(1,1-dimethylethyl)-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl methyl ester (9CI) (CA INDEX NAME)



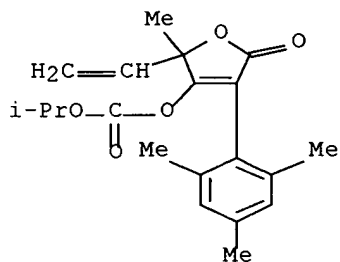
RN 148478-21-1 CAPLUS

CN Carbonic acid, 2-ethenyl-2,5-dihydro-2-methyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl methyl ester (9CI) (CA INDEX NAME)



RN 148478-22-2 CAPLUS

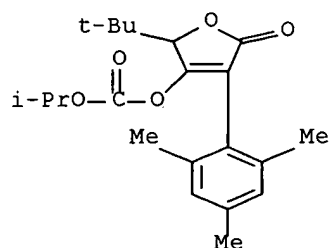
CN Carbonic acid, 2-ethenyl-2,5-dihydro-2-methyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)



RN 148478-23-3 CAPLUS

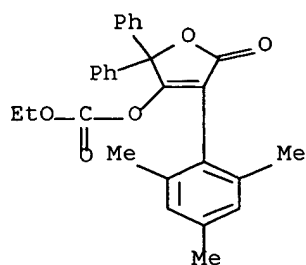
CN Carbonic acid, 2-(1,1-dimethylethyl)-2,5-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)





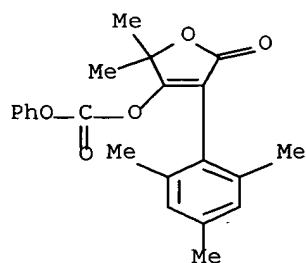
RN 148478-24-4 CAPLUS

CN Carbonic acid, 2,5-dihydro-5-oxo-2,2-diphenyl-4-(2,4,6-trimethylphenyl)-  
3-  
furanyl ethyl ester (9CI) (CA INDEX NAME)



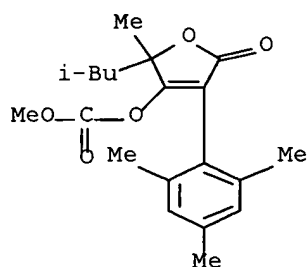
RN 148478-25-5 CAPLUS

CN Carbonic acid, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-  
3-  
furanyl phenyl ester (9CI) (CA INDEX NAME)



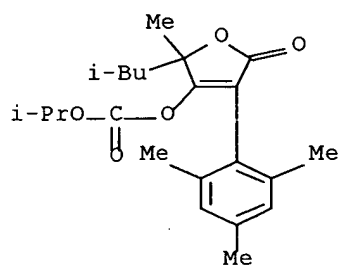
RN 148478-26-6 CAPLUS

CN Carbonic acid, 2,5-dihydro-2-methyl-2-(2-methylpropyl)-5-oxo-4-(2,4,6-  
trimethylphenyl)-3-furanyl methyl ester (9CI) (CA INDEX NAME)



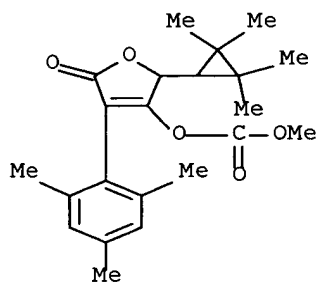
RN 148478-27-7 CAPLUS

CN Carbonic acid, 2,5-dihydro-2-methyl-2-(2-methylpropyl)-5-oxo-4-(2,5,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)



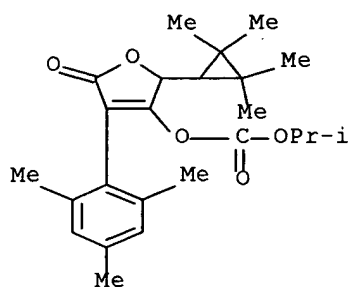
RN 148478-28-8 CAPLUS

CN Carbonic acid, 2,5-dihydro-5-oxo-2-(2,2,3,3-tetramethylcyclopropyl)-4-(2,4,6-trimethylphenyl)-3-furanyl methyl ester (9CI) (CA INDEX NAME)



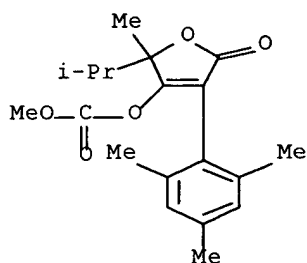
RN 148478-29-9 CAPLUS

CN Carbonic acid, 2,5-dihydro-5-oxo-2-(2,2,3,3-tetramethylcyclopropyl)-4-(2,4,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)



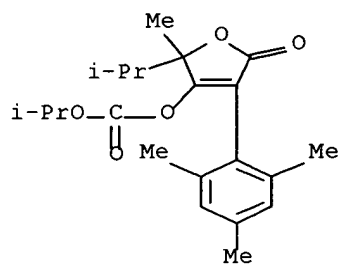
RN 148478-30-2 CAPLUS

CN Carbonic acid, 2,5-dihydro-2-methyl-2-(1-methylethyl)-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl methyl ester (9CI) (CA INDEX NAME)



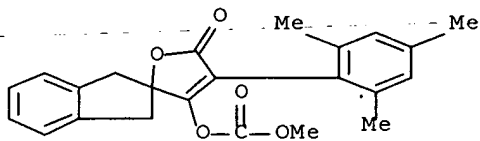
RN 148478-31-3 CAPLUS

CN Carbonic acid, 2,5-dihydro-2-methyl-2-(1-methylethyl)-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)

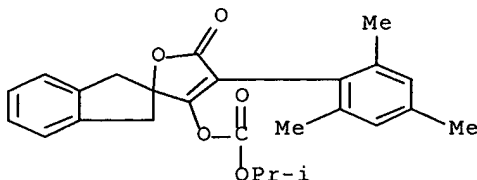


RN 148478-32-4 CAPLUS

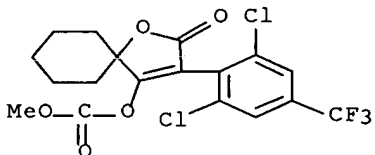
CN Carbonic acid, 1',3'-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)spiro[furan-2(5H),2'-[2H]inden]-3-yl methyl ester (9CI) (CA INDEX NAME)



RN 148478-33-5 CAPLUS  
 CN Carbonic acid, 1',3'-dihydro-5-oxo-4-(2,4,6-trimethylphenyl)spiro[furan-2(5H),2'-[2H]inden]-3-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



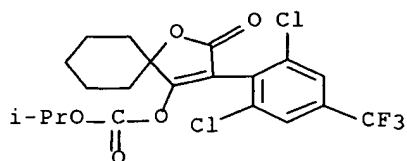
RN 148478-34-6 CAPLUS  
 CN Carbonic acid, 3-[2,6-dichloro-4-(trifluoromethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl methyl ester (9CI) (CA INDEX NAME)



IT 148478-35-7P 148478-36-8P 148478-37-9P  
 148478-38-0P 148478-39-1P 148478-40-4P  
 148478-41-5P 148478-42-6P 148478-43-7P  
 148478-44-8P 148478-45-9P 148478-46-0P  
 148478-47-1P 148478-48-2P 148478-49-3P  
 148478-50-6P 148478-51-7P 148478-52-8P  
 148478-53-9P 148478-54-0P 148478-55-1P  
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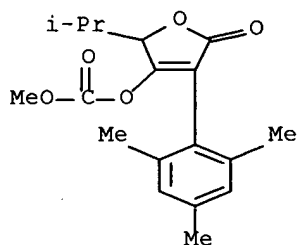
RL: BAC (Biological activity or effector, except adverse); BSU  
 (Biological  
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 study); PREP (Preparation)  
 (prepn. and biol. activity of)

RN 148478-35-7 CAPLUS  
 CN Carbonic acid, 3-[2,6-dichloro-4-(trifluoromethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



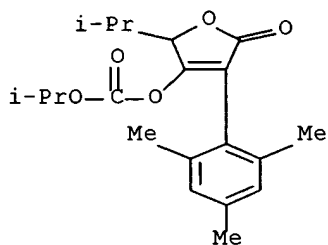
RN 148478-36-8 CAPLUS

CN Carbonic acid, 2,5-dihydro-2-(1-methylethyl)-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl methyl ester (9CI) (CA INDEX NAME)



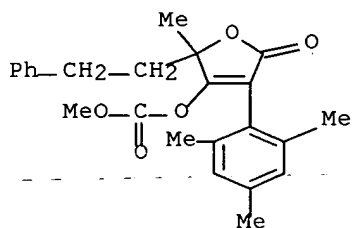
RN 148478-37-9 CAPLUS

CN Carbonic acid, 2,5-dihydro-2-(1-methylethyl)-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)



RN 148478-38-0 CAPLUS

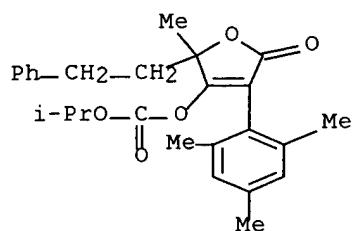
CN Carbonic acid, 2,5-dihydro-2-methyl-5-oxo-2-(2-phenylethyl)-4-(2,4,6-trimethylphenyl)-3-furanyl methyl ester (9CI) (CA INDEX NAME)



RN 148478-39-1 CAPLUS

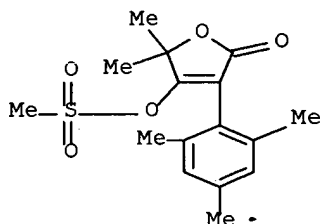
CN Carbonic acid, 2,5-dihydro-2-methyl-5-oxo-2-(2-phenylethyl)-4-(2,4,6-

trimethylphenyl)-3-furanyl 1-methylethyl ester (9CI) (CA INDEX NAME)



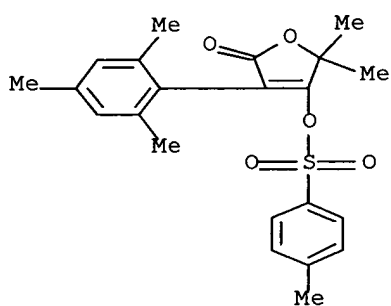
RN 148478-40-4 CAPLUS

CN 2(5H)-Furanone, 5,5-dimethyl-4-[(methylethyl)sulfonyl]oxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



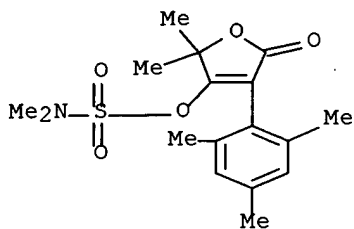
RN 148478-41-5 CAPLUS

CN 2(5H)-Furanone, 5,5-dimethyl-4-[[ (4-methylphenyl)sulfonyl]oxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



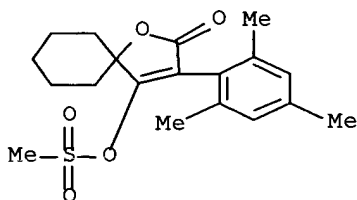
RN 148478-42-6 CAPLUS

CN Sulfamic acid, dimethyl-, 2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl ester (9CI) (CA INDEX NAME)



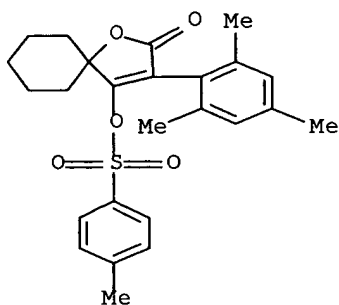
RN 148478-43-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(methylsulfonyl)oxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



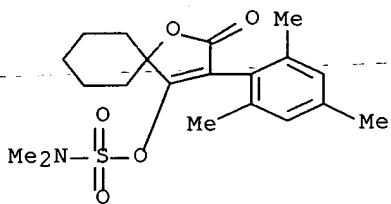
RN 148478-44-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[[[(4-methylphenyl)sulfonyl]oxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



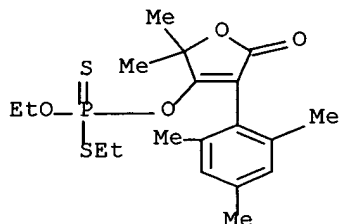
RN 148478-45-9 CAPLUS

CN Sulfamic acid, dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



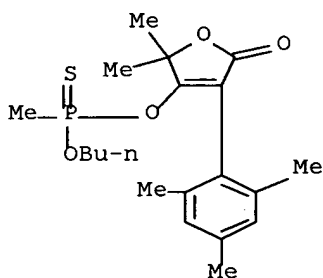
RN 148478-46-0 CAPLUS

CN Phosphorodithioic acid, O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] O,S-diethyl ester (9CI) (CA INDEX NAME)



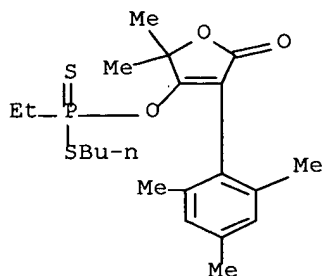
RN 148478-47-1 CAPLUS

CN Phosphonothioic acid, methyl-, O-butyl O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] ester (9CI) (CA INDEX NAME)



RN 148478-48-2 CAPLUS

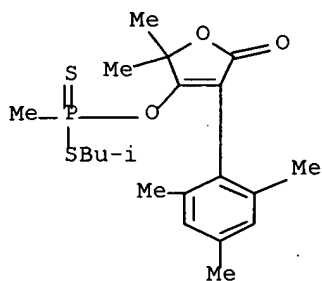
CN Phosphonodithioic acid, ethyl-, S-butyl O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] ester (9CI) (CA INDEX NAME)



RN 148478-49-3 CAPLUS

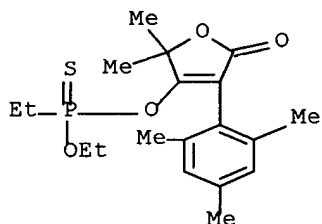
CN Phosphonodithioic acid, methyl-, O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] S-(2-methylpropyl) ester (9CI) (CA INDEX NAME)





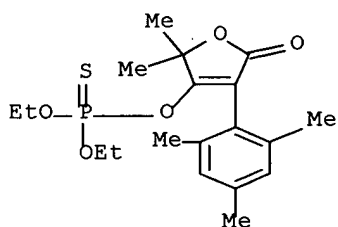
RN 148478-50-6 CAPLUS

CN Phosphonothioic acid, ethyl-, O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] O-ethyl ester (9CI) (CA INDEX NAME)



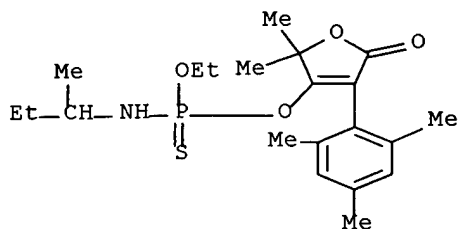
RN 148478-51-7 CAPLUS

CN Phosphorothioic acid, O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] O,O-diethyl ester (9CI) (CA INDEX NAME)



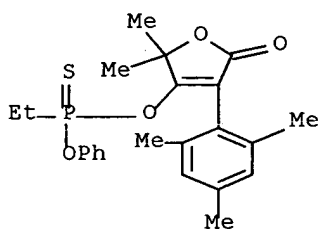
RN 148478-52-8 CAPLUS

CN Phosphoramidothioic acid, (1-methylpropyl)-, O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] O-ethyl ester (9CI) (CA INDEX NAME)



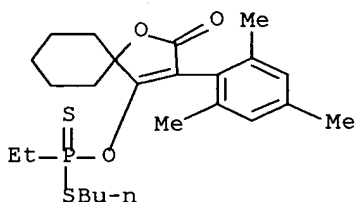
RN 148478-53-9 CAPLUS

CN Phosphonothioic acid, ethyl-, O-[2,5-dihydro-2,2-dimethyl-5-oxo-4-(2,4,6-trimethylphenyl)-3-furanyl] O-phenyl ester (9CI) (CA INDEX NAME)



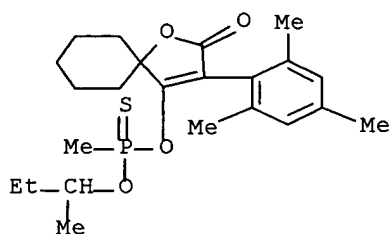
RN 148478-54-0 CAPLUS

CN Phosphonodithioic acid, ethyl-, S-butyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



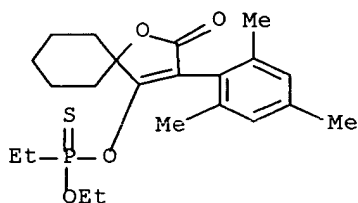
RN 148478-55-1 CAPLUS

CN Phosphonothioic acid, methyl-, O-(1-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



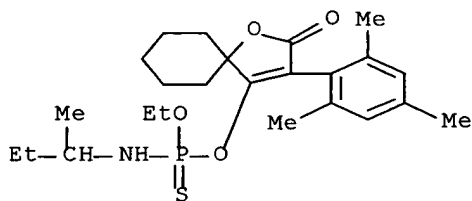
RN 148478-56-2 CAPLUS

CN Phosphonothioic acid, ethyl-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



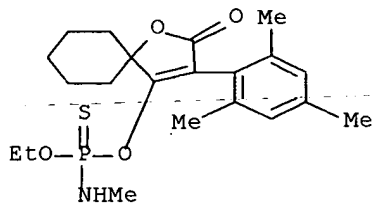
RN 148478-57-3 CAPLUS

CN Phosphoramidothioic acid, (1-methylpropyl)-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)

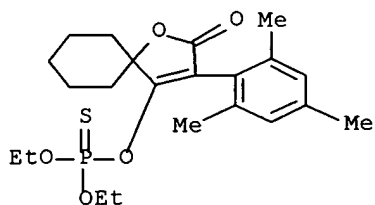


RN 148478-58-4 CAPLUS

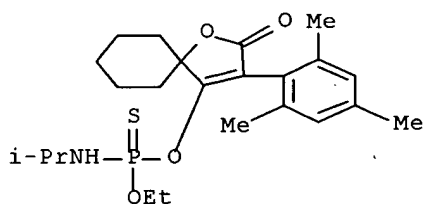
CN Phosphoramidothioic acid, methyl-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



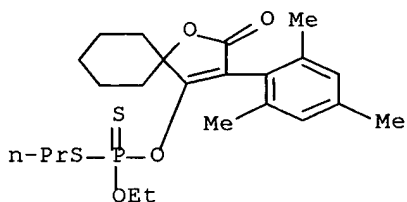
RN 148478-59-5 CAPLUS  
 CN Phosphorothioic acid, O,O-diethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



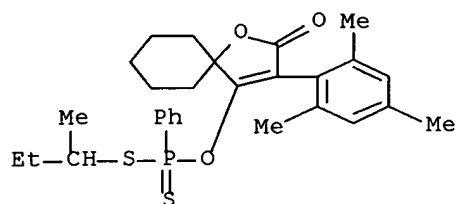
RN 148478-60-8 CAPLUS  
 CN Phosphoramidothioic acid, (1-methylethyl)-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



RN 148478-61-9 CAPLUS  
 CN Phosphorodithioic acid, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] S-propyl ester (9CI) (CA INDEX NAME)

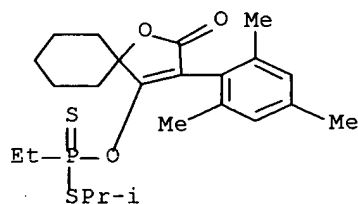


RN 148478-62-0 CAPLUS  
 CN Phosphonodithioic acid, phenyl-, S-(1-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



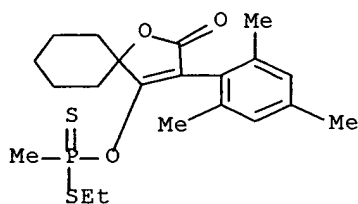
RN 148478-63-1 CAPLUS

CN Phosphonodithioic acid, ethyl-, S-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



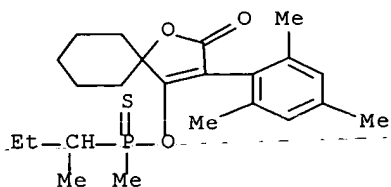
RN 148478-64-2 CAPLUS

CN Phosphonodithioic acid, methyl-, S-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



RN 148478-65-3 CAPLUS

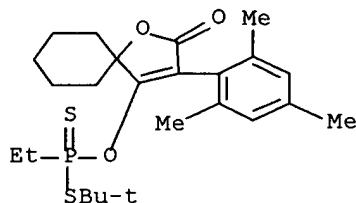
CN Phosphinothioic acid, methyl(1-methylpropyl)-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



RN 148478-66-4 CAPLUS

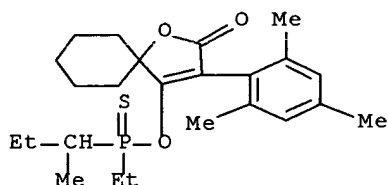
CN Phosphonodithioic acid, ethyl-, S-(1,1-dimethylethyl) O-[2-oxo-3-(2,4,6-

trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



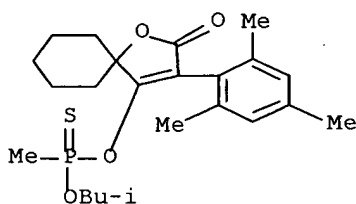
RN 148478-67-5 CAPLUS

CN Phosphinothioic acid, ethyl(1-methylpropyl)-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



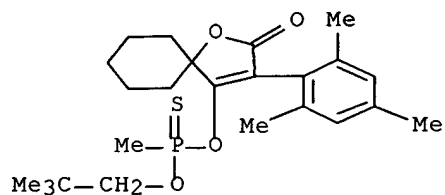
RN 148478-68-6 CAPLUS

CN Phosphonothioic acid, methyl-, O-(2-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



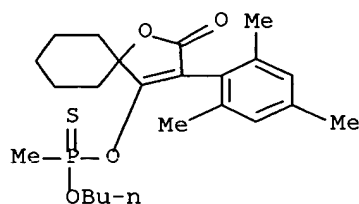
RN 148478-69-7 CAPLUS

CN Phosphonothioic acid, methyl-, O-(2,2-dimethylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



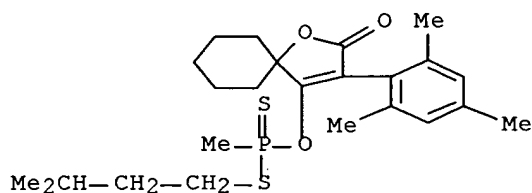
RN 148478-70-0 CAPLUS

CN Phosphonothioic acid, methyl-, O-butyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



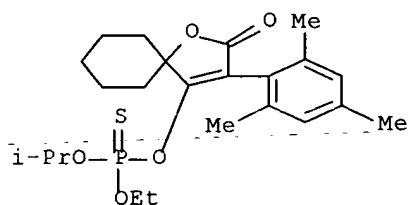
RN 148478-71-1 CAPLUS

CN . Phosphonodithioic acid, methyl-, S-(3-methylbutyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



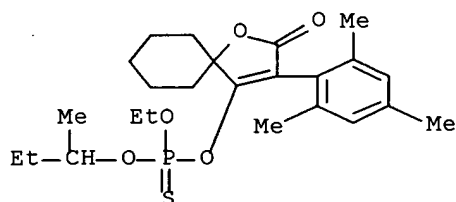
RN 148478-72-2 CAPLUS

CN Phosphorothioic acid, O-ethyl O-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



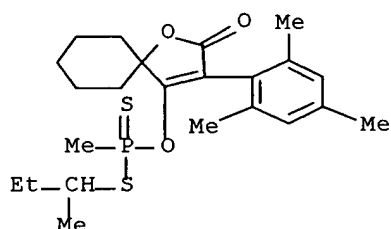
RN 148478-73-3 CAPLUS

CN Phosphorothioic acid, O-ethyl O-(1-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



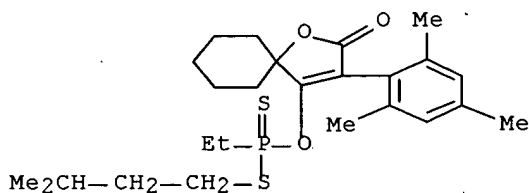
RN 148478-74-4 CAPLUS

CN Phosphonodithioic acid, methyl-, S-(1-methylpropyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



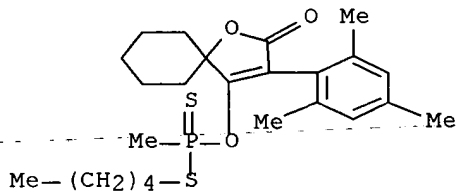
RN 148478-75-5 CAPLUS

CN Phosphonodithioic acid, ethyl-, S-(3-methylbutyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



RN 148478-76-6 CAPLUS

CN Phosphonodithioic acid, methyl-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] S-pentyl ester (9CI) (CA INDEX NAME)

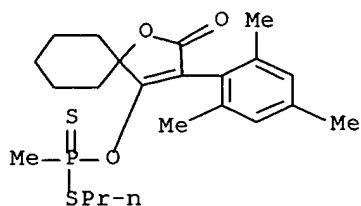


RN 148478-77-7 CAPLUS

CN Phosphonodithioic acid, methyl-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-

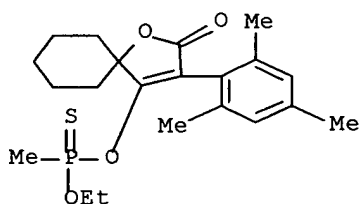


oxaspiro[4.5]dec-3-en-4-yl] S-propyl ester (9CI) (CA INDEX NAME)



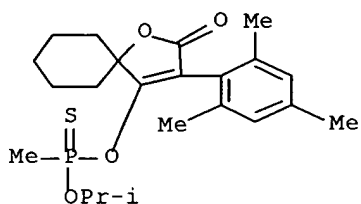
RN 148478-78-8 CAPLUS

CN Phosphonothioic acid, methyl-, O-ethyl O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



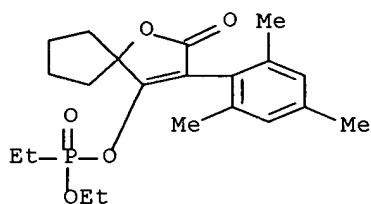
RN 148478-79-9 CAPLUS

CN Phosphonothioic acid, methyl-, O-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



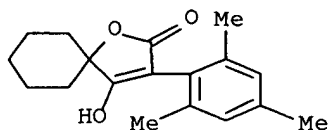
RN 148478-80-2 CAPLUS

CN Phosphonic acid, ethyl-, ethyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 148478-81-3 CAPLUS

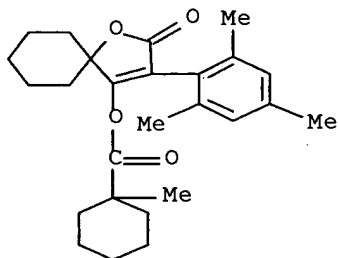
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

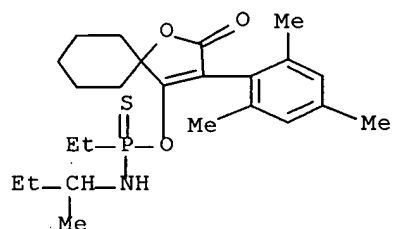
RN 148504-63-6 CAPLUS

CN Cyclohexanecarboxylic acid, 1-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



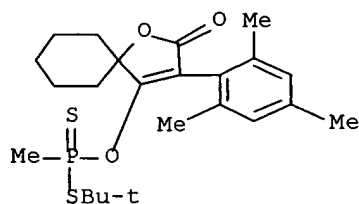
RN 148504-64-7 CAPLUS

CN Phosphonamidothioic acid, P-ethyl-N-(1-methylpropyl)-, O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



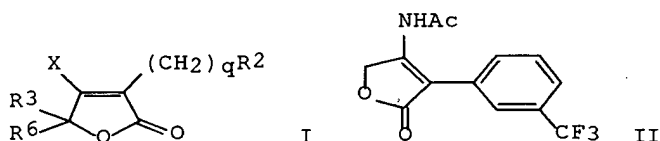
RN 148504-65-8 CAPLUS

CN Phosphonodithioic acid, methyl-, S-(1,1-dimethylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



L9 ANSWER 68 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1991:471376 CAPLUS  
 DN 115:71376  
 TI Preparation of 4-acylamino-3-aryl-5H-furan-2-ones and analogs as herbicides  
 IN Kraemer, Wolfgang; Kleefeld, Gerd; Bachmann, Juergen; Babczinski, Peter; Santel, Hans Joachim; Luerksen, Klaus; Schmidt, Robert Rudolf  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 40 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4014420	A1	19910404	DE 1990-4014420	19900505
	US 5094681	A	19920310	US 1990-575517	19900830
	EP 423482	A1	19910424	EP 1990-117449	19900911
	EP 423482	B1	19950111		
	R: BE, CH, DE, DK, FR, GB, IT, LI, NL				
	CA 2025983	AA	19910324	CA 1990-2025983	19900921
	JP 03120265	A2	19910522	JP 1990-253991	19900921
	JP 3001620	B2	20000124		
	DD 299182	A5	19920402	DD 1990-344133	19900921
	US 5207817	A	19930504	US 1991-777988	19911017
PRAI	DE 1989-3931773	A1	19890923		
	DE 1990-4014420	A	19900505		
	US 1990-575517	A2	19900830		
OS	MARPAT 115:71376				
GI					



AB The title compds. [I; X = OR<sub>1</sub>, NR<sub>4</sub>R<sub>7</sub>; R<sub>1</sub> = (cyano)alkyl, alkoxyalkyl, (halo)alkanoyl, alkoxycarbonylalkyl; R<sub>2</sub> = (un)substituted aryl; R<sub>3</sub>, R<sub>6</sub> = H, alkyl, (un)substituted aryl, aralkyl; R<sub>4</sub> = H, alkyl, alkenyl, alkoxyalkyl, alkanoyl; R<sub>7</sub> = H, OH, NH<sub>2</sub>, CHO, alkyl, etc.; NR<sub>4</sub>R<sub>7</sub> = heterocyclyl; q = 0,1] were prepd. as herbicides (no data). Thus, 3-(F<sub>3</sub>C)C<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CO<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Et (prepn. given) was cyclized and the product converted in turn, to the enol Me ether and the enamine which was acetylated to give title compd. II.

IT 134756-31-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

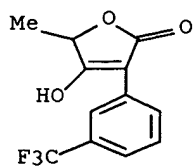
RACT

(Reactant or reagent)

(prepn. and reaction of, in prepn. of herbicides)

RN 134756-31-3 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-5-methyl-3-[3-(trifluoromethyl)phenyl]- (9CI)  
 (CA INDEX NAME)

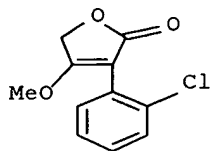


IT 100074-54-2P 134755-38-7P 134755-39-8P  
 134755-41-2P 134755-44-5P 134755-45-6P  
 134755-57-0P 134755-65-0P 134755-66-1P  
 134755-67-2P 134755-74-1P 134755-76-3P  
 134755-92-3P 134755-93-4P 134756-25-5P  
 134756-27-7P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of, as herbicide)

RN 100074-54-2 CAPLUS

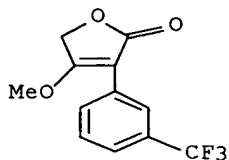
CN 2(5H)-Furanone, 3-(2-chlorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



RN 134755-38-7 CAPLUS

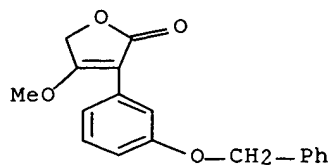
CN 2(5H)-Furanone, 4-methoxy-3-[3-(trifluoromethyl)phenyl]- (9CI) (CA

INDEX NAME)

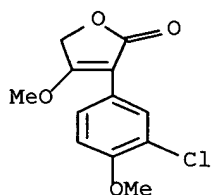


RN 134755-39-8 CAPLUS

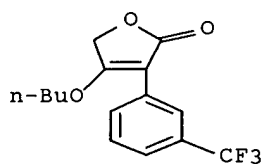
CN 2(5H)-Furanone, 4-methoxy-3-[3-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



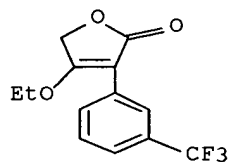
RN 134755-41-2 CAPLUS  
 CN 2(5H)-Furanone, 3-(3-chloro-4-methoxyphenyl)-4-methoxy- (9CI) (CA INDEX NAME)



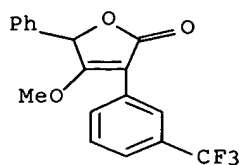
RN 134755-44-5 CAPLUS  
 CN 2(5H)-Furanone, 4-butoxy-3-[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



RN 134755-45-6 CAPLUS  
 CN 2(5H)-Furanone, 4-ethoxy-3-[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)

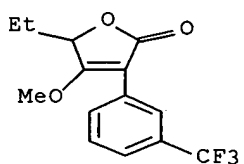


RN 134755-57-0 CAPLUS  
 CN 2(5H)-Furanone, 4-methoxy-5-phenyl-3-[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



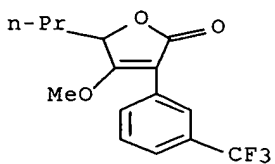
RN 134755-65-0 CAPLUS

CN 2(5H)-Furanone, 5-ethyl-4-methoxy-3-[3-(trifluoromethyl)phenyl]- (9CI)  
(CA INDEX NAME)



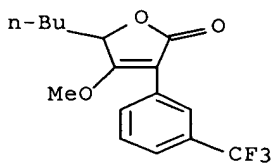
RN 134755-66-1 CAPLUS

CN 2(5H)-Furanone, 4-methoxy-5-propyl-3-[3-(trifluoromethyl)phenyl]- (9CI)  
(CA INDEX NAME)



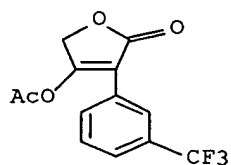
RN 134755-67-2 CAPLUS

CN 2(5H)-Furanone, 5-butyl-4-methoxy-3-[3-(trifluoromethyl)phenyl]- (9CI)  
(CA INDEX NAME)

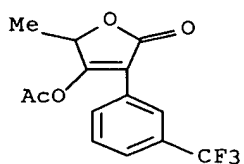


RN 134755-74-1 CAPLUS

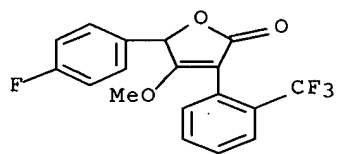
CN 2(5H)-Furanone, 4-(acetyloxy)-3-[3-(trifluoromethyl)phenyl]- (9CI) (CA  
INDEX NAME)



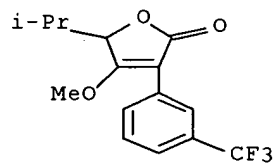
RN 134755-76-3 CAPLUS  
 CN 2(5H)-Furanone, 4-(acetyloxy)-5-methyl-3-[3-(trifluoromethyl)phenyl]-  
 (9CI) (CA INDEX NAME)



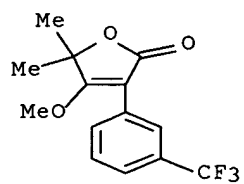
RN 134755-92-3 CAPLUS  
 CN 2(5H)-Furanone, 5-(4-fluorophenyl)-4-methoxy-3-[2-(trifluoromethyl)phenyl]-  
 (9CI) (CA INDEX NAME)



RN 134755-93-4 CAPLUS  
 CN 2(5H)-Furanone, 4-methoxy-5-(1-methylethyl)-3-[3-(trifluoromethyl)phenyl]-  
 (9CI) (CA INDEX NAME)

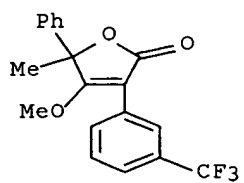


RN 134756-25-5 CAPLUS  
 CN 2(5H)-Furanone, 4-methoxy-5,5-dimethyl-3-[3-(trifluoromethyl)phenyl]-  
 (9CI) (CA INDEX NAME)



RN 134756-27-7 CAPLUS

CN 2(5H)-Furanone, 4-methoxy-5-methyl-5-phenyl-3-[3-(trifluoromethyl)phenyl]-  
(9CI) (CA INDEX NAME)





L9 ANSWER 75 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1989:407426 CAPLUS  
 DN 111:7426  
 TI Preparation of [[(heterocyclylthio)alkyl]phenyl]acrylates as fungicides  
 IN Cliff, Geoffrey Ross; Richards, Ian Christopher  
 PA Schering Agrochemicals Ltd., UK  
 SO Eur. Pat. Appl., 15 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 299694	A2	19890118	EP 1988-306296	19880711
	EP 299694	A3	19891129		
	EP 299694	B1	20001011		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	IL 87020	A1	19960912	IL 1988-87020	19880706
	AU 8818806	A1	19890112	AU 1988-18806	19880707
	AU 607235	B2	19910228		
	ZA 8804877	A	19890426	ZA 1988-4877	19880707
	DK 8803815	A	19890112	DK 1988-3815	19880708
	BR 8803436	A	19890124	BR 1988-3436	19880708
	HU 47373	A2	19890328	HU 1988-3617	19880708
	HU 204658	B	19920228		
	DD 285277	A5	19901212	DD 1988-317738	19880708
	US 5192357	A	19930309	US 1988-216831	19880708
	FI 8803297	A	19890112	FI 1988-3297	19880711
	FI 92392	B	19940729		
	FI 92392	C	19941110		
	JP 01031746	A2	19890202	JP 1988-171074	19880711
	CN 1031227	A	19890222	CN 1988-104241	19880711
	CN 1025649	B	19940817		
	PL 155671	B1	19911231	PL 1988-273673	19880711
	AT 196900	E	20001015	AT 1988-306296	19880711
	US 5304530	A	19940419	US 1993-5284	19930119
PRAI	GB 1987-16392	A	19870711		
	GB 1988-7388	A	19880329		
	US 1988-216831	A3	19880708		

OS MARPAT 111:7426

GI For diagram(s), see printed CA Issue.

AB Title compds. I [R1 = (un)substituted aryl, (un)substituted, heteroaryl, (un)substituted heterocyclyl, (un)substituted

heterocyclyl(thio)carbonyl,

(un)substituted alkenyl, (un)substituted alkynyl, (un)substituted

N-iminomethylene, (un)substituted heterocyclylidenemethyl; m = 0, n = 1;

or m, n = 0-18; p = 0, 1; X = O, S, SO, SO<sub>2</sub>, R<sub>4</sub>N; R<sub>4</sub> = bond, alkyl,

R<sub>2</sub>(R<sub>2</sub>O)Si, R<sub>2</sub>Si, (R<sub>2</sub>2O)Si; R<sub>2</sub> = alkyl; R<sub>3</sub> = H, alkyl; W = N, CQ; Q = H

or

QR<sub>3</sub> = (un)substituted 5-6 membered ring which may contain other hetero

atoms] and salts, are prepd. Condensation of 2-MeC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CO<sub>2</sub>Me with

HCO<sub>2</sub>Me

in DMF contg. NaH followed by methylation with MeI in refluxing THF

contg.

NaH gave Me (Z)-3-methoxy-2-(o-tolyl)prop-2-enoate. bromination of this

by

N-bromosuccinimide in refluxing CCl<sub>4</sub> gave Me (E)-3-methoxy-2-[2-

(bromomethyl)phenyl]prop-2-enoate followed by condensation with 2-mercaptobenzothiazole in refluxing THF contg. NaH gave Me (E)-2-[2-[[ (2-benzothiazolyl)thio]methyl]phenyl]-3-methoxy-2-propenoate (II). In foliar test II at 125 ppm of less controlled >50% of 6 fungi.

IT **120974-94-9P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

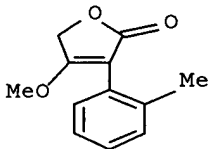
RACT

(Reactant or reagent)

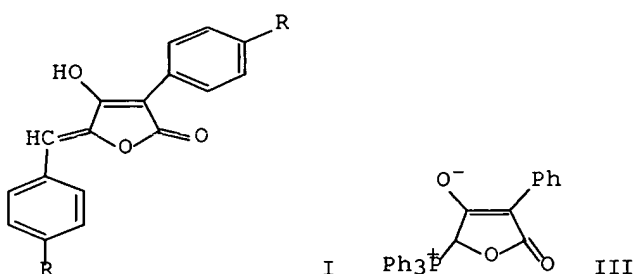
(prepn. and reaction of, in prepn. of agrochem. fungicides)

RN 120974-94-9 CAPLUS

CN 2(5H)-Furanone, 4-methoxy-3-(2-methylphenyl)- (9CI) (CA INDEX NAME)



L9 ANSWER 85 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1986:109387 CAPLUS  
 DN 104:109387  
 TI Synthesis of (E)- and (Z)-pulvinones  
 AU Campbell, Alexander C.; Maidment, Maurice S.; Pick, John H.; Stevenson, Donald F. M.  
 CS Sci. Dev. Group, Organon Lab. Ltd., Newhouse, ML1 5SH, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1985), (8), 1567-76  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 OS CASREACT 104:109387  
 GI

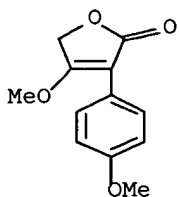


AB Cyclization of (4-RC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>)<sub>2</sub>CO (R = H, OMe, Me, CHMeEt) with (EtO<sub>2</sub>C)<sub>2</sub>, followed by thermolysis at 230.degree., gave the corresponding Z-pulvinones I (R as before). I (R = H), together with the corresponding E-isomer (II), was also prep'd. in 6 steps from PhCH<sub>2</sub>CO<sub>2</sub>H, the key step involving the Wittig reaction of the phosphonium compd. III with PhCHO to give I (R = H) and II. II was converted quant. to I (R = H) by sequential treatment with Ac<sub>2</sub>O in pyridine and NaOH in MeOH.

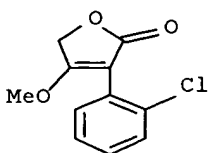
IT **58368-11-9P 100074-54-2P 100074-55-3P**  
**100074-56-4P 100074-57-5P 100074-58-6P**  
**100074-59-7P 100074-60-0P 100074-61-1P**  
**100074-62-2P 100074-63-3P 100074-64-4P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)  
 (prepn. and bromination of)

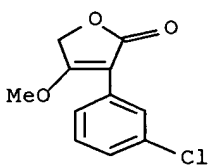
RN 58368-11-9 CAPLUS  
 CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



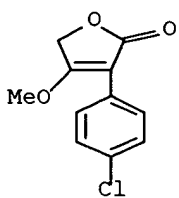
RN 100074-54-2 CAPLUS  
 CN 2(5H)-Furanone, 3-(2-chlorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



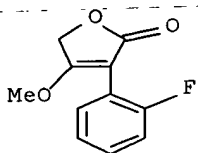
RN 100074-55-3 CAPLUS  
 CN 2(5H)-Furanone, 3-(3-chlorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



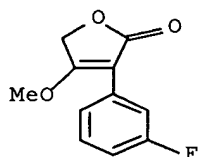
RN 100074-56-4 CAPLUS  
 CN 2(5H)-Furanone, 3-(4-chlorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



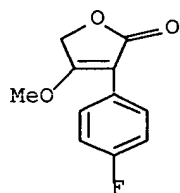
RN 100074-57-5 CAPLUS  
 CN 2(5H)-Furanone, 3-(2-fluorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



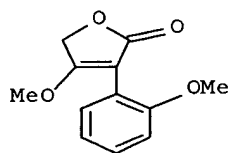
RN 100074-58-6 CAPLUS  
CN 2(5H)-Furanone, 3-(3-fluorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



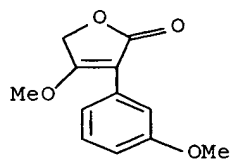
RN 100074-59-7 CAPLUS  
CN 2(5H)-Furanone, 3-(4-fluorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



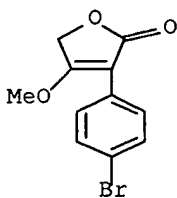
RN 100074-60-0 CAPLUS  
CN 2(5H)-Furanone, 4-methoxy-3-(2-methoxyphenyl)- (9CI) (CA INDEX NAME)



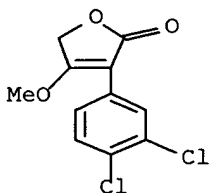
RN 100074-61-1 CAPLUS  
CN 2(5H)-Furanone, 4-methoxy-3-(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



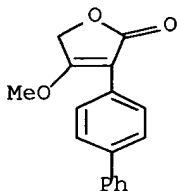
RN 100074-62-2 CAPLUS  
CN 2(5H)-Furanone, 3-(4-bromophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



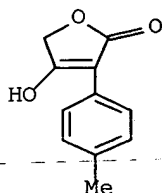
RN 100074-63-3 CAPLUS  
 CN 2(5H)-Furanone, 3-(3,4-dichlorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



RN 100074-64-4 CAPLUS  
 CN 2(5H)-Furanone, 3-[1,1'-biphenyl]-4-yl-4-methoxy- (9CI) (CA INDEX NAME)



IT **100074-53-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT  
 (Reactant or reagent)  
 (prepn. and cyclization of)  
 RN 100074-53-1 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-methylphenyl)- (9CI) (CA INDEX NAME)



IT **93831-11-9P 100074-41-7P 100074-42-8P**  
**100074-43-9P 100074-44-0P 100074-45-1P**

100074-46-2P 100074-47-3P 100074-48-4P

100074-49-5P 100074-50-8P 100074-51-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

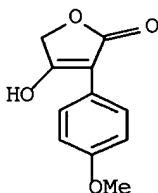
RACT

(Reactant or reagent)

(prepn. and methylation of)

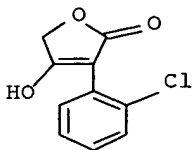
RN 93831-11-9 CAPLUS

CN 2(5H)-Furanone, 4-hydroxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



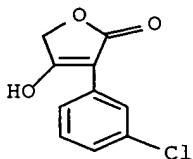
RN 100074-41-7 CAPLUS

CN 2(5H)-Furanone, 3-(2-chlorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



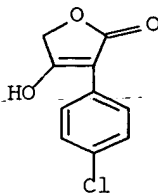
RN 100074-42-8 CAPLUS

CN 2(5H)-Furanone, 3-(3-chlorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)

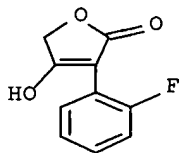


RN 100074-43-9 CAPLUS

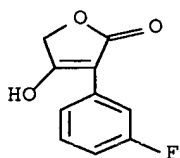
CN 2(5H)-Furanone, 3-(4-chlorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



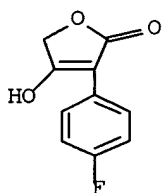
RN 100074-44-0 CAPLUS  
CN 2(5H)-Furanone, 3-(2-fluorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



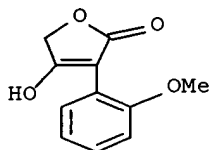
RN 100074-45-1 CAPLUS  
CN 2(5H)-Furanone, 3-(3-fluorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



RN 100074-46-2 CAPLUS  
CN 2(5H)-Furanone, 3-(4-fluorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



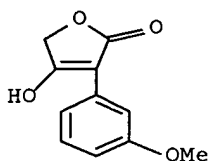
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CN 2(5H)-Furanone, 4-hydroxy-3-(2-methoxyphenyl)- (9CI) (CA INDEX NAME)



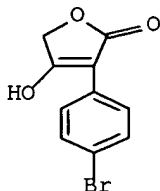
RN 100074-48-4 CAPLUS  
CN 2(5H)-Furanone, 4-hydroxy-3-(3-methoxyphenyl)- (9CI) (CA INDEX NAME)

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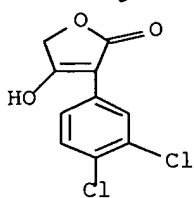




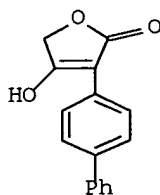
RN 100074-49-5 CAPLUS  
 CN 2(5H)-Furanone, 3-(4-bromophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



RN 100074-50-8 CAPLUS  
 CN 2(5H)-Furanone, 3-(3,4-dichlorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



RN 100074-51-9 CAPLUS  
 CN 2(5H)-Furanone, 3-[1,1'-biphenyl]-4-yl-4-hydroxy- (9CI) (CA INDEX NAME)

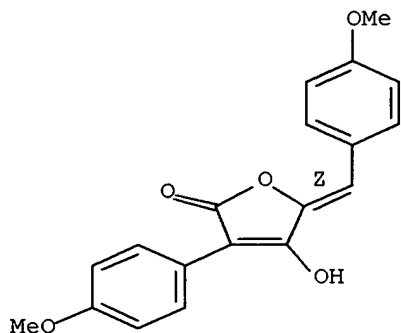


IT 100074-26-8P 100074-27-9P 100074-66-6P  
 100074-68-8P 100074-69-9P 100074-70-2P  
 100074-71-3P 100074-72-4P 100074-73-5P  
 100074-74-6P 100074-75-7P 100074-76-8P  
 100074-77-9P 100075-05-6P 100093-03-6P  
 100093-04-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

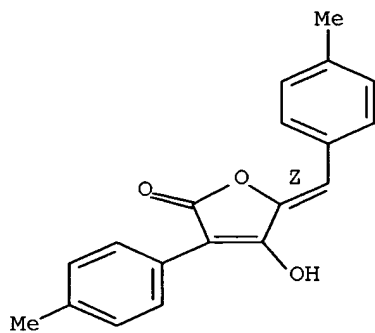
RN 100074-26-8 CAPLUS  
CN 2(5H)-Furanone, 4-hydroxy-3-(4-methoxyphenyl)-5-[(4-methoxyphenyl)methylene]-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

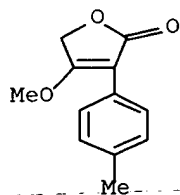


RN 100074-27-9 CAPLUS  
CN 2(5H)-Furanone, 4-hydroxy-3-(4-methylphenyl)-5-[(4-methylphenyl)methylene]-, (Z)- (9CI) (CA INDEX NAME)

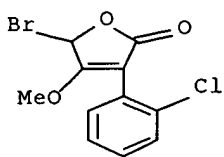
Double bond geometry as shown.



RN 100074-66-6 CAPLUS  
CN 2(5H)-Furanone, 4-methoxy-3-(4-methylphenyl)- (9CI) (CA INDEX NAME)

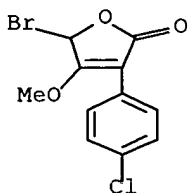


RN 100074-68-8 CAPLUS  
CN 2(5H)-Furanone, 5-bromo-3-(2-chlorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



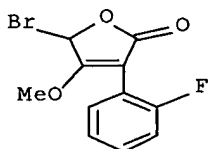
RN 100074-69-9 CAPLUS

CN 2(5H)-Furanone, 5-bromo-3-(4-chlorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



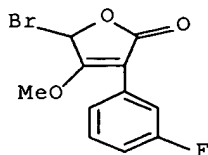
RN 100074-70-2 CAPLUS

CN 2(5H)-Furanone, 5-bromo-3-(2-fluorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



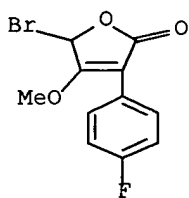
RN 100074-71-3 CAPLUS

CN 2(5H)-Furanone, 5-bromo-3-(3-fluorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



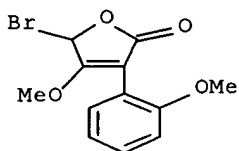
RN 100074-72-4 CAPLUS

CN 2(5H)-Furanone, 5-bromo-3-(4-fluorophenyl)-4-methoxy- (9CI) (CA INDEX NAME)



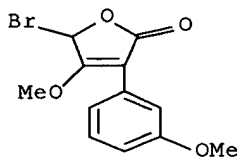
RN 100074-73-5 CAPLUS

CN 2(5H)-Furanone, 5-bromo-4-methoxy-3-(2-fluorophenyl)- (9CI) (CA INDEX NAME)



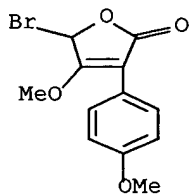
RN 100074-74-6 CAPLUS

CN 2(5H)-Furanone, 5-bromo-4-methoxy-3-(3-methoxyphenyl)- (9CI) (CA INDEX NAME)



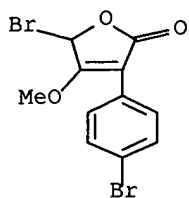
RN 100074-75-7 CAPLUS

CN 2(5H)-Furanone, 5-bromo-4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

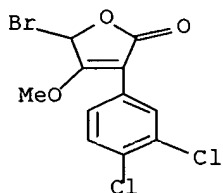


RN 100074-76-8 CAPLUS

CN 2(5H)-Furanone, 5-bromo-3-(4-bromophenyl)-4-methoxy- (9CI) (CA INDEX NAME)

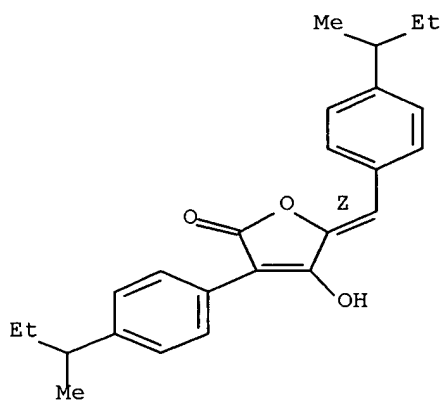


RN 100074-77-9 CAPLUS  
 CN 2(5H)-Furanone, 5-bromo-3-(3,4-dichlorophenyl)-4-methoxy- (9CI) (CA  
 INDEX  
 NAME)

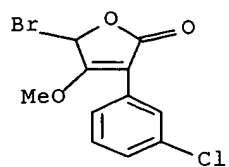


RN 100075-05-6 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-[4-(1-methylpropyl)phenyl]-5-[[4-(1-  
 methylpropyl)phenyl]methylene]-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 100093-03-6 CAPLUS  
 CN 2(5H)-Furanone, 5-bromo-3-(3-chlorophenyl)-4-methoxy- (9CI) (CA INDEX  
 NAME)

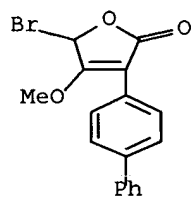


RN 100093-04-7 CAPLUS

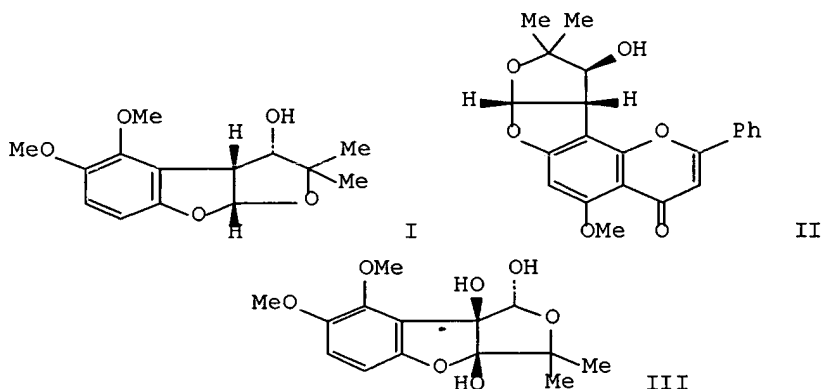
CN 2(5H)-Furanone, 3-[1,1'-biphenyl]-4-yl-5-bromo-4-methoxy- (9CI) (CA

INDEX

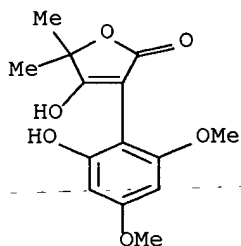
NAME)



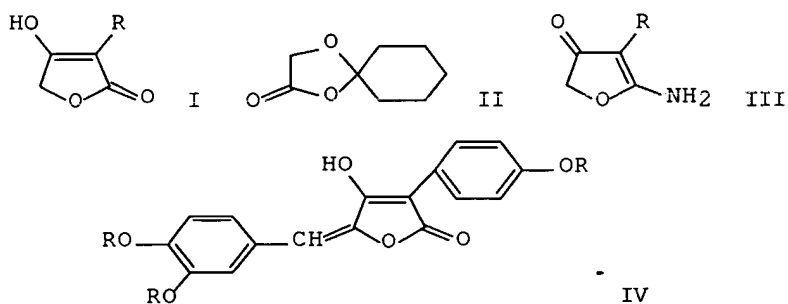
L9 ANSWER 86 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1985:453834 CAPLUS  
 DN 103:53834  
 TI Attempted synthesis of multijuginol  
 AU Antus, Sandor; Boross, Ferenc; Giber, Janos; Kajtar-Peredy, Maria;  
 Nogradi, Mihaly  
 CS Res. Group Alkaloidchem., Hung. Akad. Sci., Budapest, H-1521, Hung.  
 SO Liebigs Annalen der Chemie (1985), (5), 995-1003  
 CODEN: LACHDL; ISSN: 0170-2041  
 DT Journal  
 LA German  
 OS CASREACT 103:53834  
 GI



AB The furo[2,3-b]benzofuran fragment I of multijuginol (II) was synthesized in 11 steps from phloroglucinol, but could not be transformed into rac-II.  
 Some partly unexpected reactions of the intermediates, e.g., a pyridine-catalyzed transannular H migration of III to 2,4,6-HO(MeO)2C6H2COCH2OCMe2CO2H, are described.  
 IT **83768-73-4P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 83768-73-4 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(2-hydroxy-4,6-dimethoxyphenyl)-5,5-dimethyl-(9CI) (CA INDEX NAME)



L9 ANSWER 90 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1985:24386 CAPLUS  
 DN 102:24386  
 TI Dioxolanones as synthetic intermediates. Part 2. Synthesis of tetronic acids and pulvinones  
 AU Ramage, Robert; Griffiths, Gareth J.; Shutt, Fiona E.; Sweeney, John N.  
 A.  
 CS Dep. Chem., Univ. Manchester Inst. Sci. Technol., Manchester, M60 1QD,  
 UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1984), (7), 1539-45  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI



AB Tetronic acids I (R = Me, Ph, C<sub>6</sub>H<sub>4</sub>OMe-4, SMe, OMe, OH) were prepd. in 35-63 % yield by reaction of the dioxolanone II with RCHLiCO<sub>2</sub>R<sub>1</sub> (R as before, R<sub>1</sub> = Me, tert-Bu) in THF on warming from -70.degree. to room temp. overnight. The reaction mechanism involves ring cleavage and subsequent cyclization of LiOCH<sub>2</sub>C(OLi):CRCO<sub>2</sub>R<sub>1</sub>. Analogous treatment of II with RCHLiCN (R = Ph, Me) gave the corresponding aminofuranones III in 80 and 53% yield, resp. The pulvinone IV (R = CH<sub>2</sub>Ph) was obtained in 78% yield by reaction of a dioxolanone deriv. with 4-PhCH<sub>2</sub>OC<sub>6</sub>H<sub>4</sub>CHLiCO<sub>2</sub>Me; subsequent debenzoylation with HBr in glacial AcOH gave the naturally occurring pigment IV (R = H).

IT **93831-19-7P 93831-21-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

(Reactant or reagent)

(prepn. and debenzoylation of)

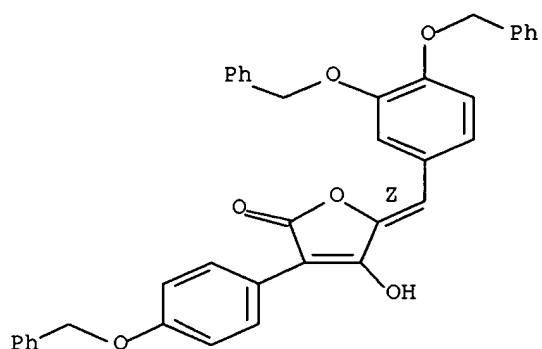
RN 93831-19-7 CAPLUS

CN 2(5H)-Furanone, 5-[[3,4-bis(phenylmethoxy)phenyl]methylene]-4-hydroxy-3-  
 [4-

(phenylmethoxy)phenyl]-, -(Z)- (9CI)- (CA-INDEX NAME)-

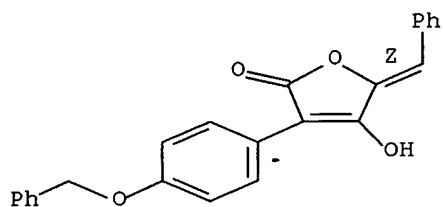
Double bond geometry as shown.



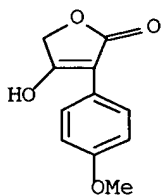


RN 93831-21-1 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-[4-(benzylmethoxy)phenyl]-5-(benzylmethylene)-  
 , (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

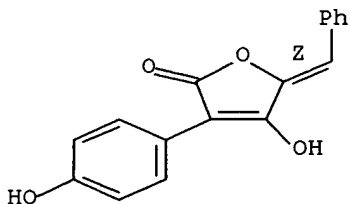


IT 93831-11-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT  
 (Reactant or reagent)  
 (prepn. and methylation of)  
 RN 93831-11-9 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



IT 93831-23-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 93831-23-3 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(4-hydroxyphenyl)-5-(benzylmethylene)-, (Z)-  
 (9CI) (CA INDEX NAME)

Double bond geometry as shown.



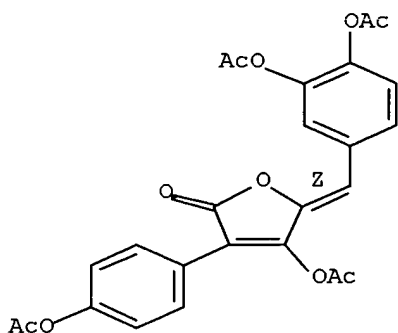
IT **93831-24-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, by acetylation of trihydroxypulvinone)

RN 93831-24-4 CAPLUS

CN 2(5H)-Furanone, 4-(acetyloxy)-3-[4-(acetyloxy)phenyl]-5-[[3,4-bis(acetyloxy)phenyl]methylene]-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

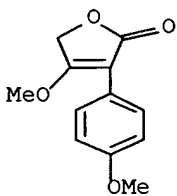


IT **58368-11-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, by methylation of (methoxyphenyl)tetrone acid)

RN 58368-11-9 CAPLUS

CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



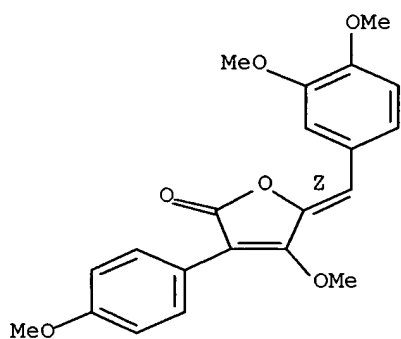
IT **71851-34-8P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, by methylation of trihydroxypulvinone)

RN 71851-34-8 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dimethoxyphenyl)methylene]-4-methoxy-3-(4-methoxyphenyl)-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 93831-22-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

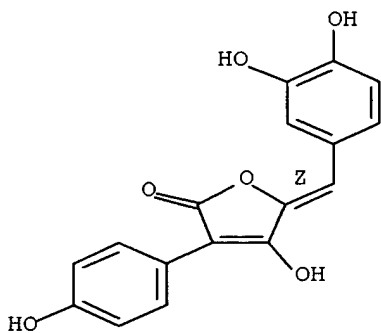
(Reactant or reagent)

(prepn., acetylation, and methylation of)

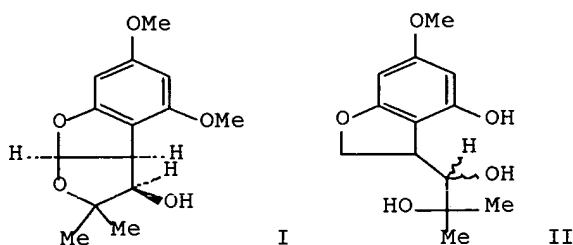
RN 93831-22-2 CAPLUS

CN 2(5H)-Furanone, 5-[(3,4-dihydroxyphenyl)methylene]-4-hydroxy-3-(4-hydroxyphenyl)-, (Z)- (9CI) (CA INDEX NAME)

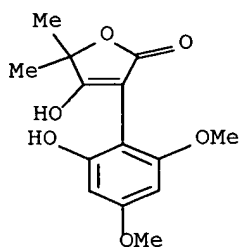
Double bond geometry as shown.



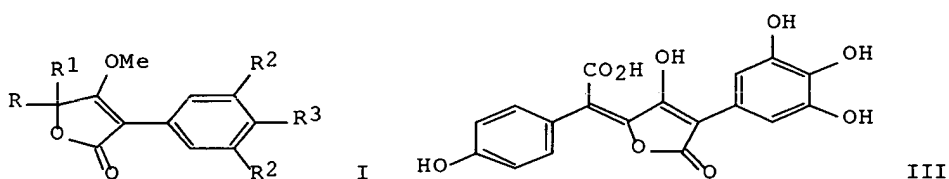
L9 ANSWER 94 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1982:615842 CAPLUS  
 DN 97:215842  
 TI Synthetic approaches to some novel Tephrosia furanoflavones  
 AU Boross, F.; Antus, S.; Nogradi, M.; Giber, J.  
 CS Res. Group Alkaloid Chem., Hung. Acad. Sci., Budapest, H-1111, Hung.  
 SO Studies in Organic Chemistry (Amsterdam) (1982), Volume Date 1981,  
 11(Flavonoids Bioflavonoids), 153-9  
 CODEN: SOCHDQ; ISSN: 0165-3253  
 DT Journal  
 LA English  
 GI



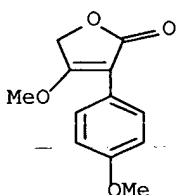
AB The synthesis of I, identical except for the OH configuration to the corresponding part of the multijuginol mol., and II, identical, except for the configuration, to the (deacetylated) corresponding part of the polystachin mol., were sketched.  
 IT **83768-73-4P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 83768-73-4 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(2-hydroxy-4,6-dimethoxyphenyl)-5,5-dimethyl-  
 (9CI) (CA INDEX NAME)



L9 ANSWER 103 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1979:474390 CAPLUS  
 DN 91:74390  
 TI Syntheses of permethylated derivatives of pinastric acid and gomphidic acid, pulvinic acid pigments of lichen and fungi  
 AU Knight, David W.; Pattenden, Gerald  
 CS Dep. Chem., Univ. Nottingham, Nottingham, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1979), (1), 84-8  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 GI



AB Metalation of tetronic acid I ( $R = R_1 = R_2 = H$ ,  $R_3 = OMe$ ) followed by treatment with  $PhCOCO_2Me$  and dehydration of the intermediate carbinol gave  
 O-methylpinastric acid [I,  $RR_1 = C(CO_2Me)Ph$ ,  $R_2 = H$ ,  $R_3 = OMe$ ], identical  
 to the O-Me deriv. of pinastric acid. Similarly, I ( $R = R_1 = R_2 = R_3 = H$ )  
 gave O-methylisopinastric acid I [ $RR_1 = C(CO_2Me)C_6H_4OMe-4$ ,  $R_2 = R_3 = H$ ]  
 and condensation of I ( $R = R_1 = H$ ,  $R_2 = R_3 = OMe$ ) gave permethylated gomphidic acid I [ $RR_1 = C(CO_2Me)C_6H_4OMe-4$ ,  $R_2 = R_3 = OMe$ ] (II). A comparative study involving the  $^1H$  NMR of II, established III as the structure of gomphidic acid from Gomphidius glutinosus.  
 IT **58368-11-9**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (condensation reaction of, with Me benzoylformate)  
 RN 58368-11-9 CAPLUS  
 CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



IT **61418-13-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

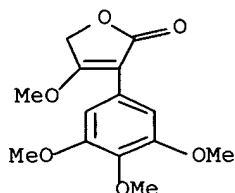
RACT

(Reactant or reagent)

(prepn. and condensation reaction of, with Me  
(methoxybenzoyl)formate)

RN 61418-13-1 CAPLUS

CN 2(5H)-Furanone, 4-methoxy-3-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX  
NAME)



IT 61418-12-0P 71007-43-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

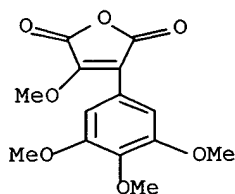
RACT

(Reactant or reagent)

(prepn. and hydride redn. of)

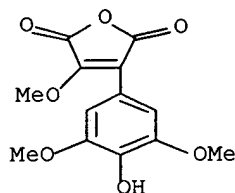
RN 61418-12-0 CAPLUS

CN 2,5-Furandione, 3-methoxy-4-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX  
NAME)



RN 71007-43-7 CAPLUS

CN 2,5-Furandione, 3-(4-hydroxy-3,5-dimethoxyphenyl)-4-methoxy- (9CI) (CA  
INDEX NAME)



IT 22736-30-7P 61418-14-2P 61418-15-3P

71007-37-9P 71007-40-4P

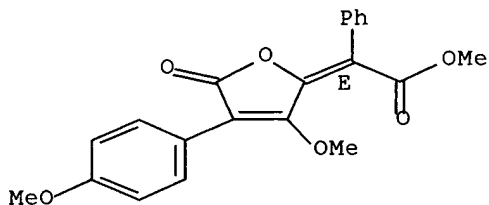
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

RN 22736-30-7 CAPLUS

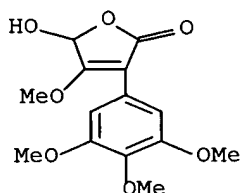
CN Benzeneacetic acid, .alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-  
furanylidene]-, methyl ester, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



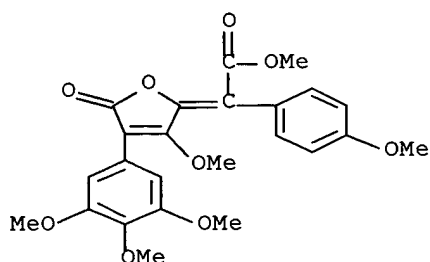
RN 61418-14-2 CAPLUS

CN 2(5H)-Furanone, 5-hydroxy-4-methoxy-3-(3,4,5-trimethoxyphenyl)- (9CI)  
(CA INDEX NAME)



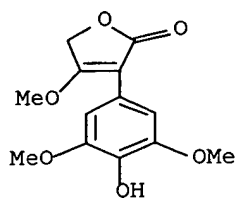
RN 61418-15-3 CAPLUS

CN Benzeneacetic acid, 4-methoxy-.alpha.-[3-methoxy-5-oxo-4-(3,4,5-  
trimethoxyphenyl)-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX  
NAME)



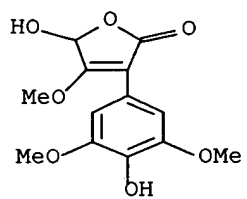
RN 71007-37-9 CAPLUS

CN 2(5H)-Furanone, 3-(4-hydroxy-3,5-dimethoxyphenyl)-4-methoxy- (9CI) (CA  
INDEX NAME)



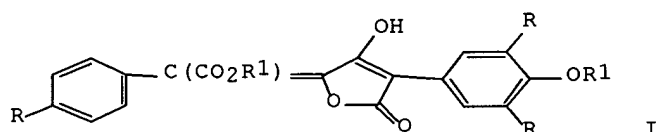
RN 71007-40-4 CAPLUS

CN 2(5H)-Furanone, 5-hydroxy-3-(4-hydroxy-3,5-dimethoxyphenyl)-4-methoxy-  
(9CI) (CA INDEX NAME)

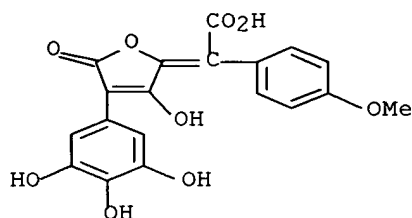




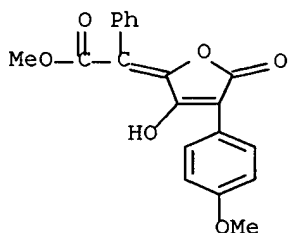
L9 ANSWER 114 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1977:16470 CAPLUS  
 DN 86:16470  
 TI Synthesis of the pulvinic acid pigments of lichen and fungi  
 AU Knight, David W.; Pattenden, Gerald  
 CS Dep. Chem., Univ. Nottingham, Nottingham, UK  
 SO Journal of the Chemical Society, Chemical Communications (1976), (16),  
 660-1  
 CODEN: JCCCAT; ISSN: 0022-4936  
 DT Journal  
 LA English  
 GI



AB The total syntheses are described of permethylated derivs. of gomphidic acid (I; R = OH, R1 = H) and pinastric acid (I; R = H, R1 = Me), the pulvinic acid pigments found in Gomphidius glutinosus and Lepraria flava,  
 resp., from 3,5,4-R2(MeO)C6H2CH2CN (R = OMe, H resp.) in 4 steps.  
 IT **61418-20-0P**  
 RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (of Gomphidius glutinosus, total synthesis of)  
 RN 61418-20-0 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-5-oxo-4-(3,4,5-trihydroxyphenyl)-2(5H)-furanlydene]-4-methoxy- (9CI) (CA INDEX NAME)



IT **61418-21-1P**  
 RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (of Lepraria flava, total synthesis of)  
 RN 61418-21-1 CAPLUS  
 CN Benzeneacetic acid, .alpha.-[3-hydroxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanlydene]-, methyl ester (9CI) (CA INDEX NAME)

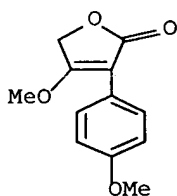


IT 58368-11-9P 61418-13-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and addn. reaction with benzoyl formate deriv.)

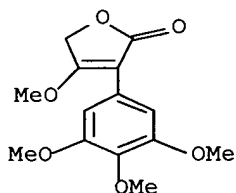
RN 58368-11-9 CAPLUS

CN 2(5H)-Furanone, 4-methoxy-3-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 61418-13-1 CAPLUS

CN 2(5H)-Furanone, 4-methoxy-3-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)



IT 61418-17-5P 61418-18-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT

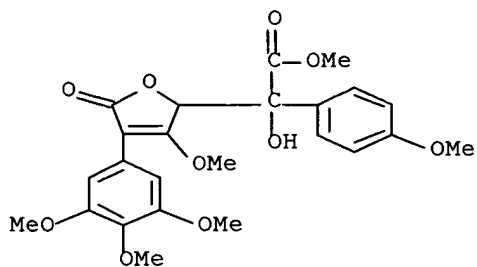
(Reactant or reagent)  
(prepn. and dehydration of)

RN 61418-17-5 CAPLUS

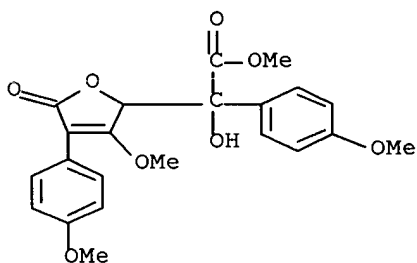
CN 2-Furanacetic acid, 2,5-dihydro-.alpha.-hydroxy-3-methoxy-.alpha.-(4-methoxyphenyl)-5-oxo-4-(3,4,5-trimethoxyphenyl)-, methyl ester (9CI)

(CA

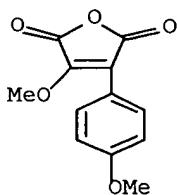
INDEX NAME)



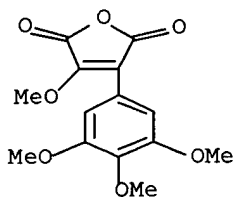
RN 61418-18-6 CAPLUS  
 CN 2-Furanacetic acid, 2,5-dihydro-.alpha.-hydroxy-3-methoxy-.alpha.,4-bis(4-methoxyphenyl)-5-oxo-, methyl ester (9CI) (CA INDEX NAME)



IT **49829-96-1P 61418-12-0P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
 RACT  
 (Reactant or reagent)  
 (prepn. and redn. of)  
 RN 49829-96-1 CAPLUS  
 CN 2,5-Furandione, 3-methoxy-4-(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



RN 61418-12-0 CAPLUS  
 CN 2,5-Furandione, 3-methoxy-4-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)



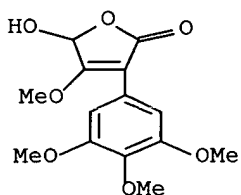
IT 61418-14-2P 61418-15-3P 61475-48-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 61418-14-2 CAPLUS

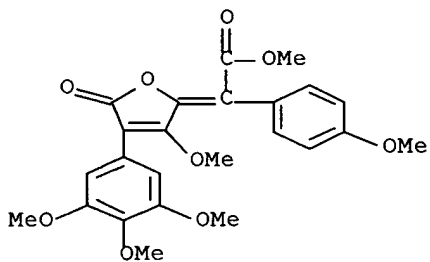
CN 2(5H)-Furanone, 5-hydroxy-4-methoxy-3-(3,4,5-trimethoxyphenyl)- (9CI)  
(CA

INDEX NAME)



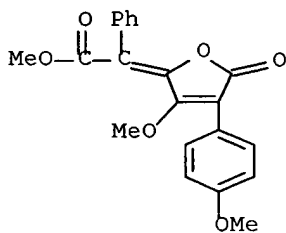
RN 61418-15-3 CAPLUS

CN Benzeneacetic acid, 4-methoxy-.alpha.-[3-methoxy-5-oxo-4-(3,4,5-trimethoxyphenyl)-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)

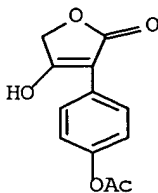


RN 61475-48-7 CAPLUS

CN Benzeneacetic acid, .alpha.-[3-methoxy-4-(4-methoxyphenyl)-5-oxo-2(5H)-furanylidene]-, methyl ester (9CI) (CA INDEX NAME)

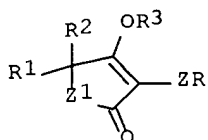


L9 ANSWER 171 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1968:494792 CAPLUS  
 DN 69:94792  
 TI Antifungal studies on drugs. I. Antifungal activity of five-membered lactone derivatives  
 AU Sakurai, Kennosuke; Matsumoto, Hiroichi; Adachi, Jun  
 CS Toyama Univ., Toyama, Japan  
 SO Yakugaku Zasshi (1968), 88(7), 919-24  
 CODEN: YKKZAJ; ISSN: 0031-6903  
 DT Journal  
 LA Japanese  
 AB The antifungal activity of 71 kinds of 5-membered lactones against *Aspergillus glaucus* var *tonophilus*, *A. niger*, *A. oryzae* var *microsporus*, *Penicillium frequentans*, and *Rhizopus nigricans* was tested.  $\gamma$ -(p-Chlorophenyl)- $\gamma$ -butyrolactone,  $\gamma$ -(p-ethylphenyl)- $\gamma$ -valerolactone,  $\gamma$ -(butylidene)- $\Delta^4$ -. $\alpha$ -,  $\beta$ -butenolide,  $\alpha$ -hydroxy- $\beta$ -benzoyl- $\Delta^4$ -. $\alpha$ -,  $\beta$ -butenolide,  $\gamma$ -(p-chlorophenyl)- $\Delta^4$ -. $\beta$ -,  $\gamma$ -butenolide, and  $\alpha$ -bromo- $\alpha$ -octyl- $\beta$ -hydroxy- $\Delta^4$ -. $\beta$ -,  $\gamma$ -butenolide were as effective as dehydroacetic acid and Et p-hydroxybenzoate. The relation between structure and antifungal activity was also discussed.  
 IT **21053-92-9**  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (fungicidal activity of)  
 RN 21053-92-9 CAPLUS  
 CN 2(5H)-Furanone, 4-hydroxy-3-(p-hydroxyphenyl)-, 3-acetate (8CI) (CA INDEX NAME)



L9 ANSWER 47 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1998:402444 CAPLUS  
 DN 129:67712  
 TI Preparation of spiro[tetrahydropyran-3,2'-pyrrolidine-3,5-dione]  
 derivatives and analogs as herbicides and pesticides  
 IN Hagemann, Hermann; Fischer, Reiner; Bretschneider, Thomas; Erdelen,  
 Christoph; Wachendorff-Neumann, Ulrike; Dahmen, Peter; et al.  
 PA Bayer A.-G., Germany; Hagemann, Hermann; Fischer, Reiner; Bretschneider,  
 Thomas; Erdelen, Christoph  
 SO PCT Int. Appl., 135 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9825928	A1	19980618	WO 1997-EP6708	19971201
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	DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR,				
	KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ,				
	PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG,				
	US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,				
	GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,				
	GN, ML, MR, NE, SN, TD, TG				
	DE 19651686	A1	19980618	DE 1996-19651686	19961212
	AU 9855595	A1	19980703	AU 1998-55595	19971201
	EP 944633	A1	19990929	EP 1997-952026	19971201
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
	CN 1240449	A	20000105	CN 1997-180627	19971201
	BR 9714470	A	20000516	BR 1997-14470	19971201
	JP 2001505892	T2	20010508	JP 1998-526161	19971201
	US 6288102	B1	20010911	US 1999-319489	19990604
→	US 6391912	B1	20020521	US 2001-895649	20010629
	US 2002072617	A1	20020613		
	US 2002161034	A1	20021031	US 2002-59094	20020128
PRAI	DE 1996-19651686	A	19961212		
	WO 1997-EP6708	W	19971201		
	US 1999-319489	A3	19990604		
	US 2001-895619	A3	20010629		
OS	MARPAT 129:67712				
GI					



AB Title compds. [I; R1R2 = CH2O(CH2)3 throughout][II; R = halo, alkyl,  
 alkoxy, (un)substituted Ph, etc.; R3 = H, acyl, NH4, metal ion; Z =  
 (un)substituted 1,2-phenylene; Z1 = O, S, NH] were prepd. Thus,  
 tetrahydropyran-3-one was treated with NH3/NaCN and the product N-

acylated

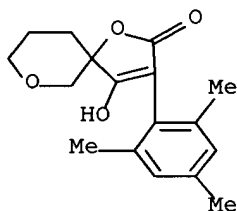
by mesitylacetyl chloride to give R1R2C(CN)NHCOCH2ZMe (Z = 4,6-dimethyl-1,2-phenylene) which was hydrolyzed and the esterified product cyclized to give II (R = Me, R3 = H, Z = 4,6-dimethyl-1,2-phenylene, Z1 = NH). Data for biol. activity of I were given.

IT 209111-40-0P 209111-41-1P 209111-42-2P  
209111-43-3P 209111-44-4P 209111-45-5P  
209111-46-6P 209111-47-7P 209111-48-8P  
209111-49-9P 209111-50-2P 209111-51-3P  
209111-52-4P 209111-53-5P 209111-54-6P  
209111-55-7P 209111-56-8P 209111-57-9P  
209111-58-0P 209111-59-1P 209111-60-4P  
209111-61-5P 209111-62-6P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of spiro[tetrahydropyran-3,2'-pyrrolidine-3,5-dione] derivs. and analogs as herbicides and pesticides)

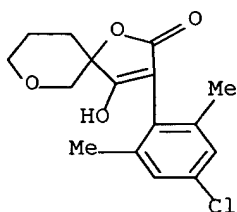
RN 209111-40-0 CAPLUS

CN 1,7-Dioxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)-(9CI) (CA INDEX NAME)



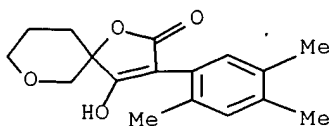
RN 209111-41-1 CAPLUS

CN 1,7-Dioxaspiro[4.5]dec-3-en-2-one, 3-(4-chloro-2,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



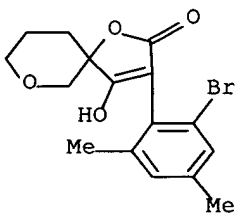
RN 209111-42-2 CAPLUS

CN 1,7-Dioxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,5-trimethylphenyl)-(9CI) (CA INDEX NAME)



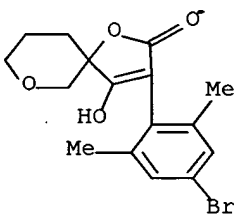
RN 209111-43-3 CAPLUS

CN 1,7-Dioxaspiro[4.5]dec-3-en-2-one, 3-(2-bromo-4,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



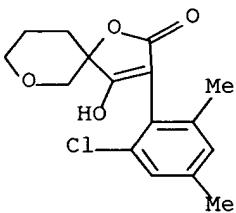
RN 209111-44-4 CAPLUS

CN 1,7-Dioxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



RN 209111-45-5 CAPLUS

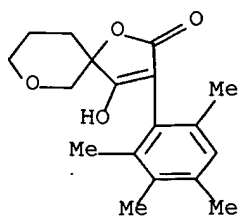
CN 1,7-Dioxaspiro[4.5]dec-3-en-2-one, 3-(2-chloro-4,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



RN 209111-46-6 CAPLUS

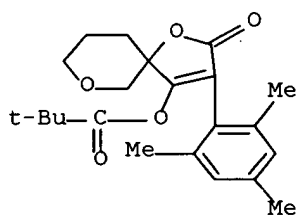
CN 1,7-Dioxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,3,4,6-tetramethylphenyl)- (9CI) (CA INDEX NAME)





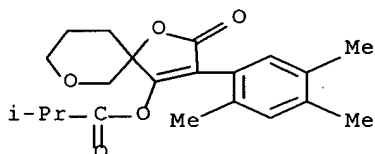
RN 209111-47-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



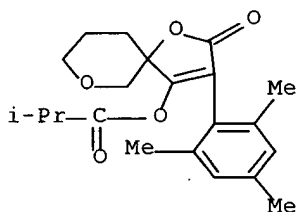
RN 209111-48-8 CAPLUS

CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,4,5-trimethylphenyl)-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



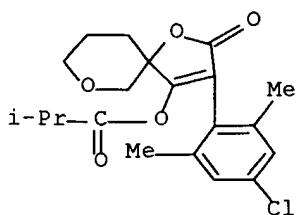
RN 209111-49-9 CAPLUS

CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



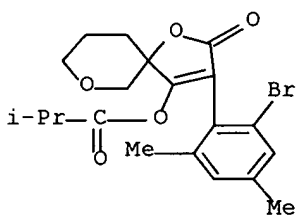
RN 209111-50-2 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



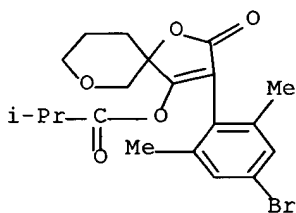
RN 209111-51-3 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



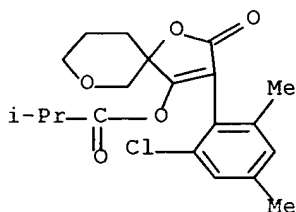
RN 209111-52-4 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



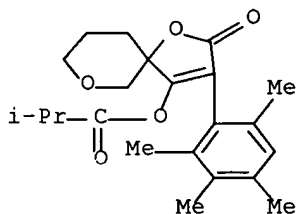
RN 209111-53-5 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



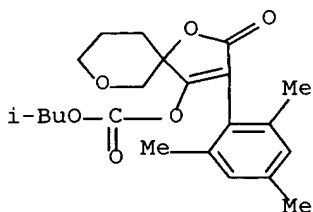
RN 209111-54-6 CAPLUS

CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,3,4,6-tetramethylphenyl)-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



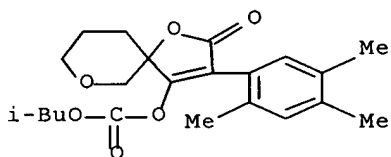
RN 209111-55-7 CAPLUS

CN Carbonic acid, 2-methylpropyl 2-oxo-3-(2,4,6-trimethylphenyl)-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



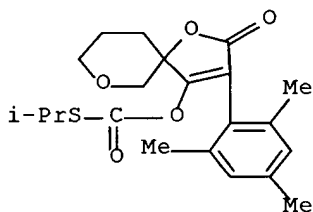
RN 209111-56-8 CAPLUS

CN Carbonic acid, 2-methylpropyl 2-oxo-3-(2,4,5-trimethylphenyl)-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



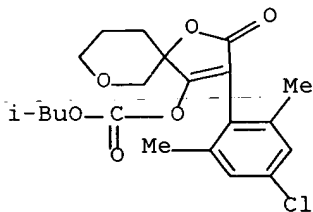
RN 209111-57-9 CAPLUS

CN Carbonothioic acid, S-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1,7-dioxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



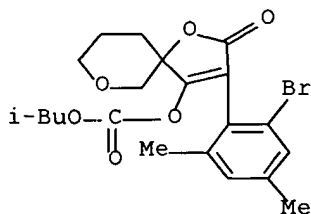
RN 209111-58-0 CAPLUS

CN Carbonic acid, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1,7-dioxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



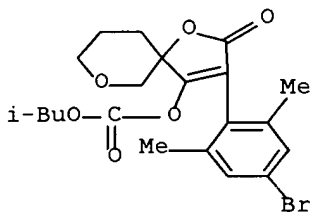
RN 209111-59-1 CAPLUS

CN Carbonic acid, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1,7-dioxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



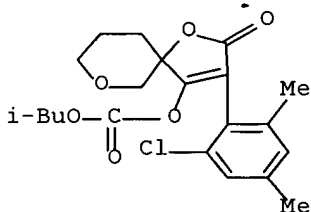
RN 209111-60-4 CAPLUS

CN Carbonic acid, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1,7-dioxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



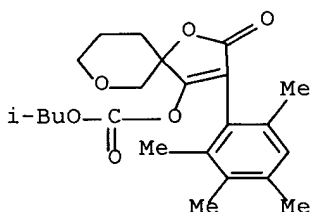
RN 209111-61-5 CAPLUS

CN Carbonic acid, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1,7-dioxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



RN 209111-62-6 CAPLUS

CN Carbonic acid, 2-methylpropyl 2-oxo-3-(2,3,4,6-tetramethylphenyl)-1,7-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

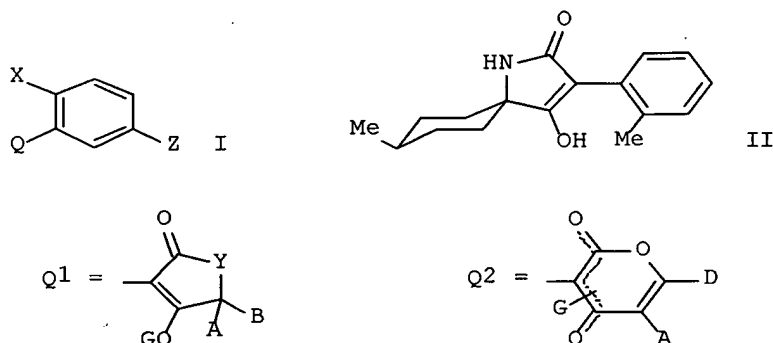


RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 48 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1998:112341 CAPLUS  
 DN 128:180328  
 TI Preparation of phenyl-substituted heterocyclic ketoenols as pesticides.  
 IN Lieb, Folker; Fischer, Reiner; Bretschneider, Thomas; Ruther, Michael;  
 Graff, Alan; Schneider, Udo; et al.  
 PA Bayer A.-G., Germany; Lieb, Folker; Fischer, Reiner; Bretschneider,  
 Thomas; Ruther, Michael; Graff, Alan  
 SO PCT Int. Appl., 161 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9805638	A2	19980212	WO 1997-EP3973	19970723
	WO 9805638	A3	19980319		
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	RW:		GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
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	AU 9737706	A1	19980225	AU 1997-37706	19970723
	AU 726090	B2	20001102		
	EP 915846	A2	19990519	EP 1997-934523	19970723
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	CN 1232450	A	19991020	CN 1997-198554	19970723
	JP 2000516918	T2	20001219	JP 1998-507541	19970723
	EP 1277749	A1	20030122	EP 2002-23657	19970723
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	EP 1277751	A1	20030122	EP 2002-23659	19970723
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	EP 1277734	A1	20030122	EP 2002-23660	19970723
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	EP 1277735	A1	20030122	EP 2002-23661	19970723
	R:		BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT		
	ZA 9706915	A	19980210	ZA 1997-6915	19970804
	US 6114374	A	20000905	US 1999-230653	19990128
	KR 2000029671	A	20000525	KR 1999-700749	19990129
	US 6255342	B1	20010703	US 2000-548129	20000412
	US 2002010204	A1	20020124	US 2001-809619	20010315
	US 6359151	B2	20020319		
	US 6504036	B1	20030107	US 2001-6115	20011210
PRAI	DE 1996-19631586	A	19960805		
	DE 1997-19716591	A	19970421		
	EP 1997-934523	A3	19970723		
	WO 1997-EP3973	W	19970723		
	US 1999-230653	A3	19990128		
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US 2001-809619 A3 20010315  
 OS MARPAT 128:180328  
 GI



AB Title compds. [I; X = halo, alkyl, alkenyl, alkynyl, alkoxy, benzyloxy, haloalkyl, haloalkoxy, cyano, NO<sub>2</sub>; Z = H, amino, halo, alkyl, alkoxy, haloalkyl, haloalkoxy, OH, cyano, NO<sub>2</sub>, (substituted) PhO, PhS, heteroaryloxy, heteroarylthio, phenylalkoxy, phenylalkylthio; Q = Q1, Q2;

Y = NH, O, S; A = (substituted) alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl, (unsatd.) cycloalkyl, heterocyclyl, aryl, aralkyl, heteroaryl; B = alkyl, alkoxyalkyl; AB, AD = atoms to form (unsatd.) (substituted) carbocyclic or heterocyclic rings; D = H, (substituted) alkyl, alkenyl, alkynyl, alkoxyalkyl, alkylthioalkyl, (unsatd.) cycloalkyl, heterocyclyl, aralkyl, aryl, heteroarylalkyl, heteroaryl; G

=

H, acyl], were prepd. Thus, title compd. (II) (prepn. given) at 0.15 gave

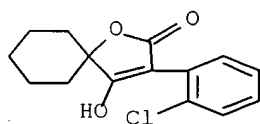
100% kill of *Phaedon cochleariae* larvae on cabbage leaves.

IT 203313-73-9P 203313-74-0P 203313-75-1P  
 203313-76-2P 203313-77-3P 203313-78-4P  
 203313-79-5P 203313-80-8P 203313-81-9P  
 203313-82-0P 203313-83-1P 203313-84-2P  
 203313-85-3P 203313-86-4P 203313-87-5P  
 203313-88-6P 203313-89-7P

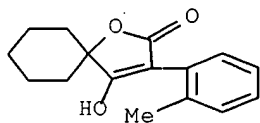
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of phenyl-substituted heterocyclic ketoenols as pesticides)

RN 203313-73-9 CAPLUS

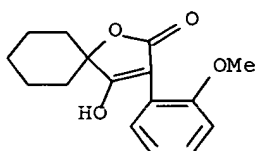
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-chlorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



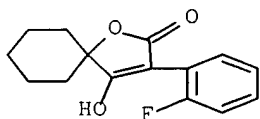
RN 203313-74-0 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2-methylphenyl)- (9CI) (CA INDEX NAME)



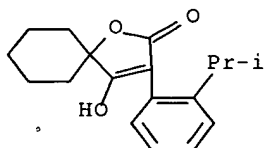
RN 203313-75-1 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2-methoxyphenyl)- (9CI) (CA INDEX NAME)



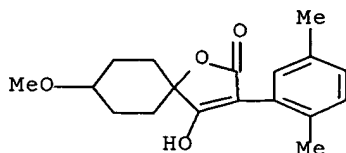
RN 203313-76-2 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-fluorophenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



RN 203313-77-3 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-[2-(1-methylethyl)phenyl]- (9CI) (CA INDEX NAME)

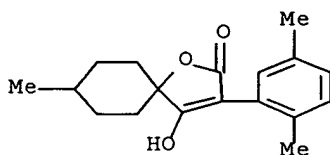


RN 203313-78-4 CAPLUS  
 CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,5-dimethylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



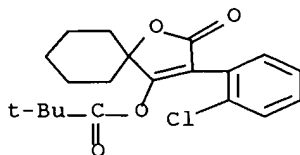
RN 203313-79-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,5-dimethylphenyl)-4-hydroxy-8-methyl-  
(9CI) (CA INDEX NAME)



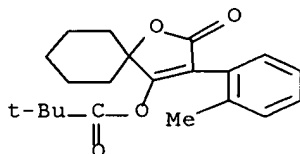
RN 203313-80-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-chlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 203313-81-9 CAPLUS

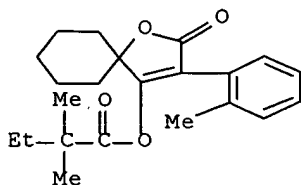
CN Propanoic acid, 2,2-dimethyl-, 3-(2-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 203313-82-0 CAPLUS

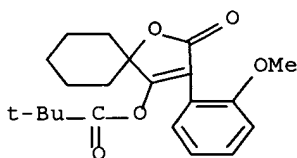
CN Butanoic acid, 2,2-dimethyl-, 3-(2-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





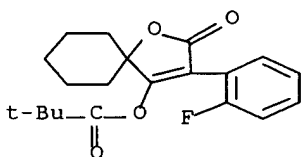
RN 203313-83-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-methoxyphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



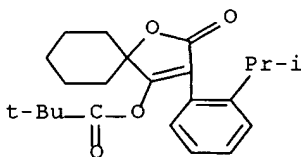
RN 203313-84-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-fluorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



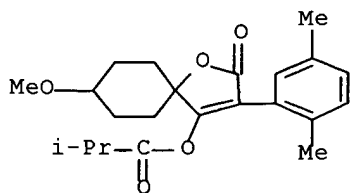
RN 203313-85-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-[2-(1-methylethyl)phenyl]-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



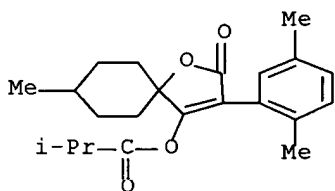
RN 203313-86-4 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



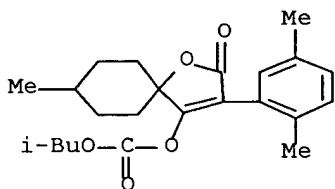
RN 203313-87-5 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,5-dimethylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



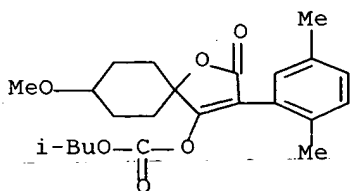
RN 203313-88-6 CAPLUS

CN Carbonic acid, 3-(2,5-dimethylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



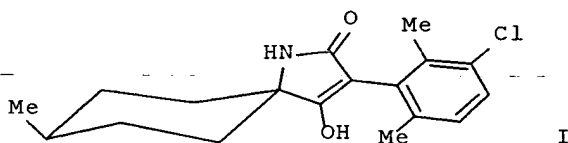
RN 203313-89-7 CAPLUS

CN Carbonic acid, 3-(2,5-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 50 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1997:679056 CAPLUS  
 DN 127:318875  
 TI Arylheterocyclic keto enols as pesticides and herbicides  
 IN Lieb, Volker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Graff, Alan; Schneider, Udo  
 PA Bayer A.-G., Germany; Lieb, Volker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; et al.  
 SO PCT Int. Appl., 192 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9736868	A1	19971009	WO 1997-EP1426	19970321
	W: AU, BB, BG, BR, BY, CA, CN, CZ, HU, IL, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, TR, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	DE 19649665	A1	19971009	DE 1996-19649665	19961129
	CA 2250417	AA	19971009	CA 1997-2250417	19970321
	AU 9722900	A1	19971022	AU 1997-22900	19970321
	AU 725852	B2	20001019		
	EP 891330	A1	19990120	EP 1997-915409	19970321
	R: BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, PT				
	CN 1215390	A	19990428	CN 1997-193592	19970321
	BR 9708425	A	19990803	BR 1997-8425	19970321
	JP 2000507564	T2	20000620	JP 1997-534875	19970321
	KR 2000004994	A	20000125	KR 1998-7606	19980925
	KR 2000004994	A	20000125	KR 1998-707606	19980925
	US 6140358	A	20001031	US 1998-155637	19980929
	US 2001004629	A1	20010621	US 2000-550105	20000414
	US 6271190	B2	20010807		
	US 6388123	B1	20020514	US 2001-871611	20010601
	US 6486343	B1	20021126	US 2002-74351	20020212
PRAI	DE 1996-19613171	A	19960402		
	DE 1996-19649665	A	19961129		
	WO 1997-EP1426	W	19970321		
	US 1998-155637	A3	19980929		
	US 2000-550105	A3	20000414		
	US 2001-871611	A3	20010601		
OS	MARPAT 127:318875				
GI					



AB Title compds. were prepd. Thus, 3,2,6-Cl(Me)2C6H2CH2CO2H was treated with

Me cis-1-amino-4-methylcyclohexanecarboxylate and cyclized with base to give the pyrrolinone I. At 0.1% I gave 100% control of Nephrotettix cincticeps on rice.

IT 197710-62-6P 197710-64-8P

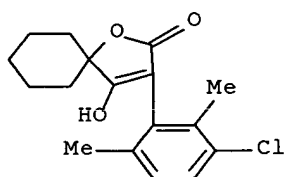
RL: AGR (Agricultural use); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of arylheterocyclic keto enols as insecticides and acaricides)

RN 197710-62-6 CAPLUS

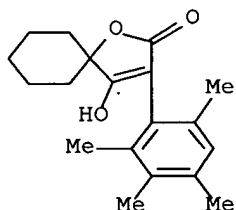
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(3-chloro-2,6-dimethylphenyl)-4-hydroxy-

(9CI) (CA INDEX NAME)



RN 197710-64-8 CAPLUS

CN\* 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,3,4,6-tetramethylphenyl)-  
(9CI) (CA INDEX NAME)



IT 197710-65-9P 197710-66-0P 197710-67-1P

197710-68-2P 197710-69-3P 197710-70-6P

197710-71-7P 197710-72-8P 197710-73-9P

197710-74-0P 197710-75-1P 197710-76-2P

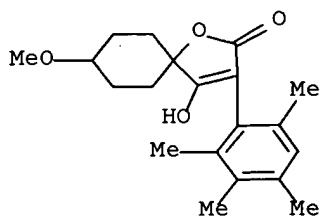
197710-77-3P

RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of arylheterocyclic keto enols as insecticides and acaricides)

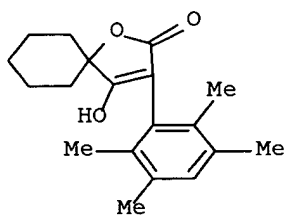
RN 197710-65-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methoxy-3-(2,3,4,6-tetramethylphenyl)- (9CI) (CA INDEX NAME)



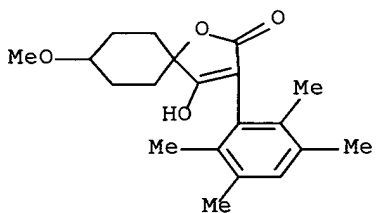
RN 197710-66-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,3,5,6-tetramethylphenyl)- (9CI) (CA INDEX NAME)



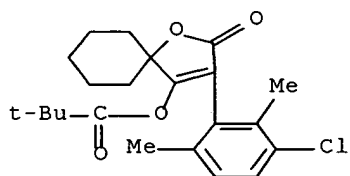
RN 197710-67-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methoxy-3-(2,3,5,6-tetramethylphenyl)- (9CI) (CA INDEX NAME)



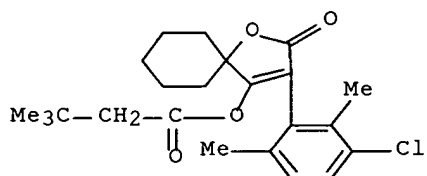
RN 197710-68-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(3-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



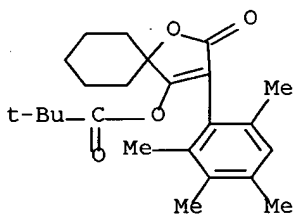
RN 197710-69-3 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(3-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



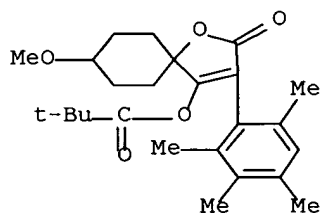
RN 197710-70-6 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



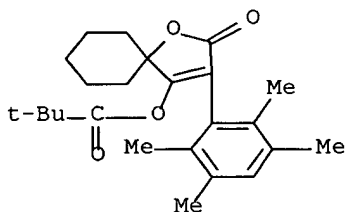
RN 197710-71-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



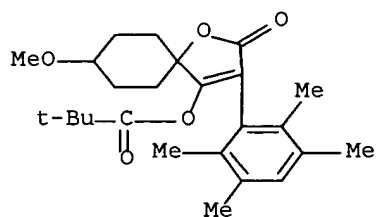
RN 197710-72-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,3,5,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



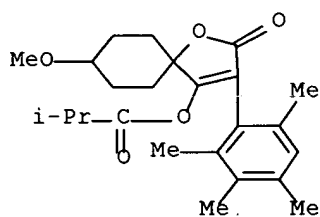
RN 197710-73-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,3,5,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



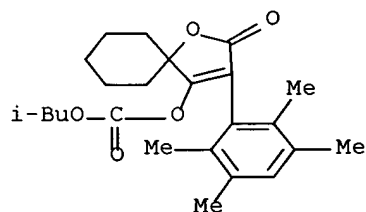
RN 197710-74-0 CAPLUS

CN Propanoic acid, 2-methyl-, 8-methoxy-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



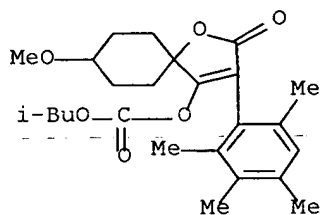
RN 197710-75-1 CAPLUS

CN Carbonic acid, 2-methylpropyl 2-oxo-3-(2,3,5,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



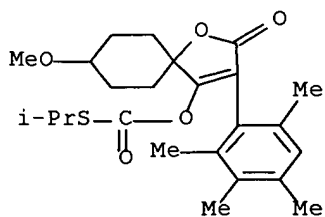
RN 197710-76-2 CAPLUS

CN Carbonic acid, 8-methoxy-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



RN 197710-77-3 CAPLUS

CN Carbonothioic acid, O-[8-methoxy-2-oxo-3-(2,3,4,6-tetramethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] S-(1-methylethyl) ester (9CI) (CA INDEX NAME)





L9 ANSWER 51 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1997:151521 CAPLUS

DN 126:157396

TI Preparation of 3-phenylheterocycloalkyl-2,4-dione enols as pesticides and

herbicides

IN Lieb, Folker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Dahmen, Peter; Dollinger, Markus; Santel, Hans-Joachim; Graff, Alan; Andersch, Wolfram

PA Bayer A.-G., Germany

SO Ger. Offen., 135 pp.

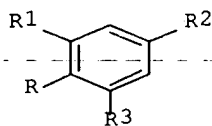
CODEN: GWXXBX

DT Patent

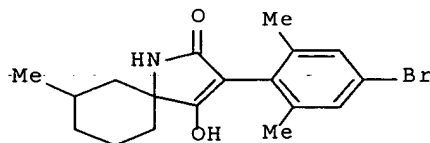
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19603332	A1	19970102	DE 1996-19603332	19960131
	CA 2225830	AA	19970123	CA 1996-2225830	19960617
	WO 9702243	A1	19970123	WO 1996-EP2601	19960617
	W:	AU, BB, BG, BR, BY, CA, CN, CZ, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, TR, UA, US			
	RW:	AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9663561	A1	19970205	AU 1996-63561	19960617
	AU 707357	B2	19990708		
	EP 835243	A1	19980415	EP 1996-922817	19960617
	EP 835243	B1	20030129		
	R:	BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL			
	CN 1193960	A	19980923	CN 1996-196456	19960617
	BR 9609301	A	19990525	BR 1996-9301	19960617
	JP 11510481	T2	19990914	JP 1996-504750	19960617
	TW 410141	B	20001101	TW 1996-85107798	19960628
	US 5994274	A	19991130	US 1997-981610	19971223
	US 6251830	B1	20010626	US 1999-360510	19990726
	US 2002022575	A1	20020221	US 2001-839481	20010420
	US 6469196	B2	20021022		
	CN 1362397	A	20020807	CN 2001-138493	20011114
PRAI	DE 1995-19523850	A1	19950630		
	DE 1996-19603332	A	19960131		
	WO 1996-EP2601	W	19960617		
	US 1997-981610	A3	19971223		
	US 1999-360510	A3	19990726		
OS	MARPAT 126:157396				
GI					



I



II

AB Title compds. [I; R = 4-(O-acyl)hydroxy-2-oxo-3-pyrrolin-2-yl, -2,5-dihydro-3-furyl, -2,5-dihydro-3-thienyl, etc.; R1 = alkyl; R2,R3 = halo or alkyl] were prepd. Thus, 4,2,6-BrMe2C6H2CH2CO2H was amidated by Me 1-amino-3-methylcyclohexanecarboxylate and the product cyclized to give

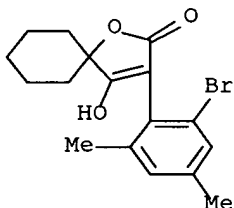
title compd. II. Data for biol. activity of I were given.

IT 186747-50-2P 186747-51-3P 186747-52-4P  
186747-53-5P 186747-54-6P 186747-55-7P  
186747-56-8P 186747-57-9P 186747-58-0P  
186747-59-1P 186747-60-4P 186747-61-5P  
186747-62-6P 186747-63-7P 186747-64-8P  
186747-65-9P 186747-66-0P 186747-68-2P  
186747-69-3P 186747-70-6P 186747-72-8P  
186747-74-0P 186747-76-2P 186747-78-4P  
186747-80-8P 186747-82-0P 186747-84-2P  
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186747-89-7P 186747-90-0P 186747-91-1P  
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186747-95-5P 186747-96-6P 186747-97-7P  
186747-98-8P 186747-99-9P 186748-00-5P  
186748-01-6P 186748-02-7P 186748-03-8P  
186748-04-9P 186748-05-0P 186748-06-1P  
186748-07-2P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 3-phenylheterocycloalkyl-2,4-dione enols as pesticides and herbicides)

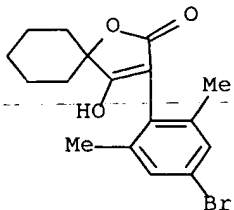
RN 186747-50-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-bromo-4,6-dimethylphenyl)-4-hydroxy-(9CI) (CA INDEX NAME)



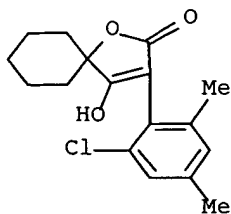
RN 186747-51-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2,6-dimethylphenyl)-4-hydroxy-(9CI) (CA INDEX NAME)



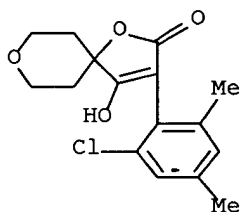
RN 186747-52-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-chloro-4,6-dimethylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



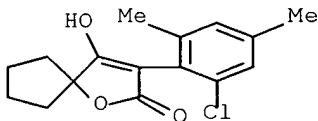
RN 186747-53-5 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 3-(2-chloro-4,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



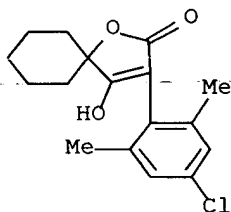
RN 186747-54-6 CAPLUS

CN 1-Oxaspiro[4.4]non-3-en-2-one, 3-(2-chloro-4,6-dimethylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



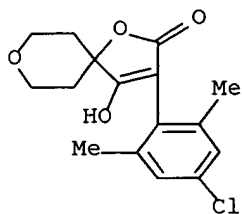
RN 186747-55-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-chloro-2,6-dimethylphenyl)-4-hydroxy-  
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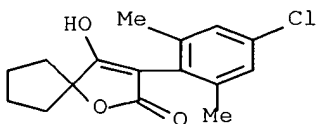
RN 186747-56-8 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 3-(4-chloro-2,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



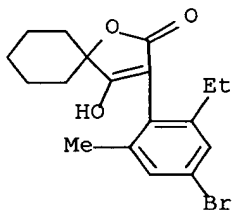
RN 186747-57-9 CAPLUS

CN 1-Oxaspiro[4.4]non-3-en-2-one, 3-(4-chloro-2,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



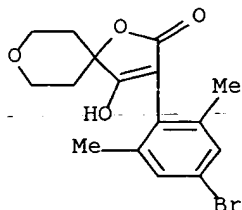
RN 186747-58-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-ethyl-6-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



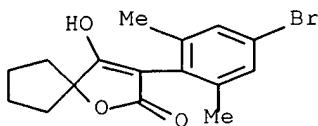
RN 186747-59-1 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



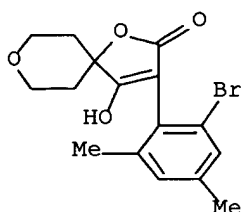
RN 186747-60-4 CAPLUS

CN 1-Oxaspiro[4.4]non-3-en-2-one, 3-(4-bromo-2,6-dimethylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



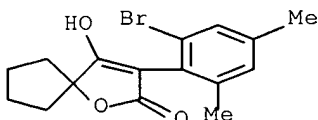
RN 186747-61-5 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 3-(2-bromo-4,6-dimethylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



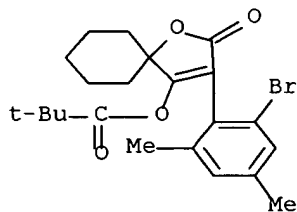
RN 186747-62-6 CAPLUS

CN 1-Oxaspiro[4.4]non-3-en-2-one, 3-(2-bromo-4,6-dimethylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



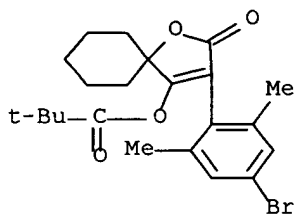
RN 186747-63-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



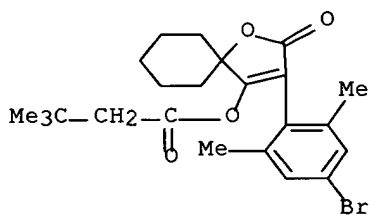
RN 186747-64-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



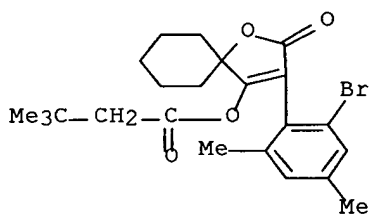
RN 186747-65-9 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



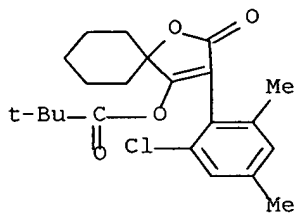
RN 186747-66-0 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



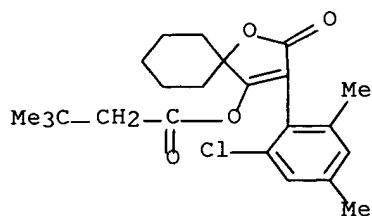
RN 186747-68-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



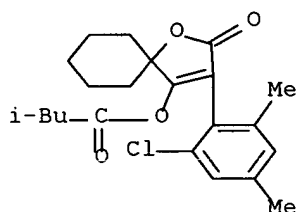
RN 186747-69-3 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



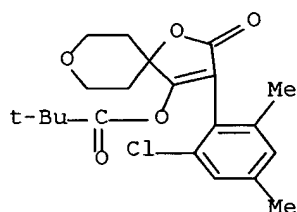
RN 186747-70-6 CAPLUS

CN Butanoic acid, 3-methyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



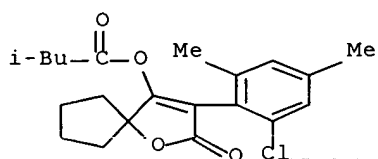
RN 186747-72-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



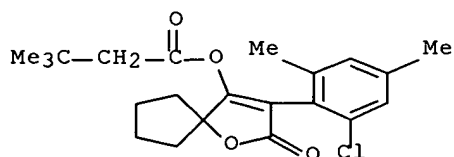
RN 186747-74-0 CAPLUS

CN Butanoic acid, 3-methyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



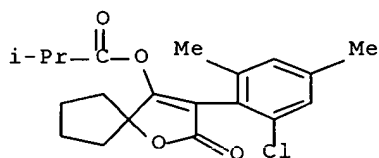
RN 186747-76-2 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



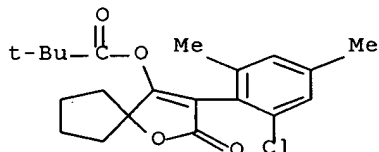
RN 186747-78-4 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



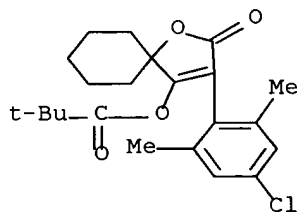
RN 186747-80-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 186747-82-0 CAPLUS

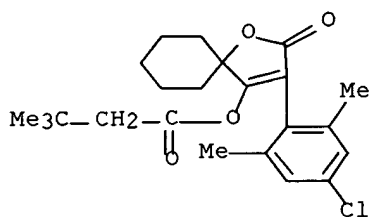
CN Propanoic acid, 2,2-dimethyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 186747-84-2 CAPLUS

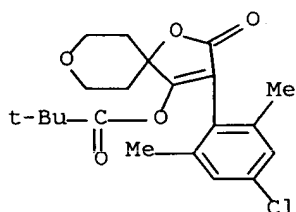
CN Butanoic acid, 3,3-dimethyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





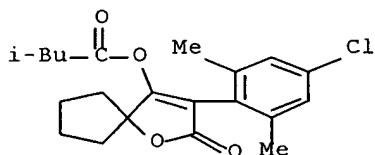
RN 186747-85-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



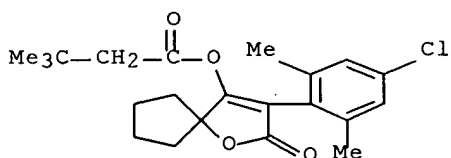
RN 186747-87-5 CAPLUS

CN Butanoic acid, 3-methyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



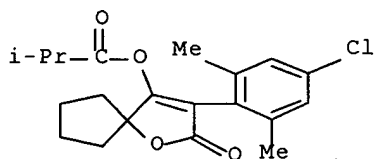
RN 186747-88-6 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



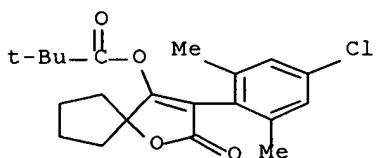
RN 186747-89-7 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



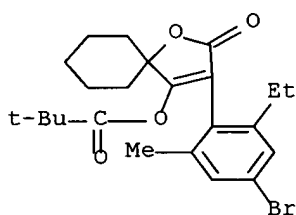
RN 186747-90-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-chloro-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



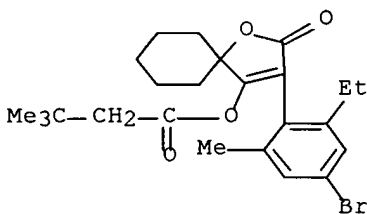
RN 186747-91-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2-ethyl-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



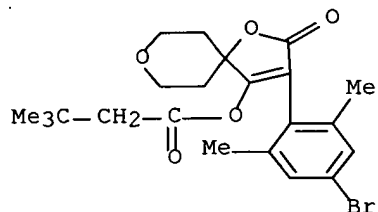
RN 186747-92-2 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-2-ethyl-6-methylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



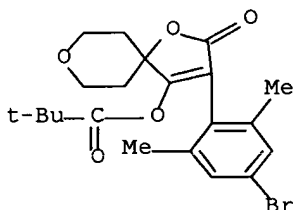
RN 186747-93-3 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



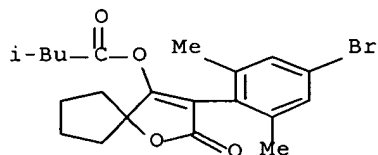
RN 186747-94-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



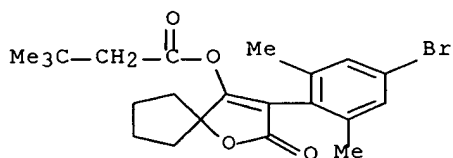
RN 186747-95-5 CAPLUS

CN Butanoic acid, 3-methyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



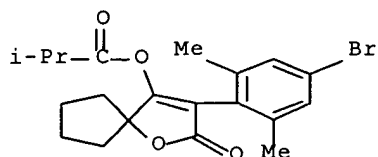
RN 186747-96-6 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



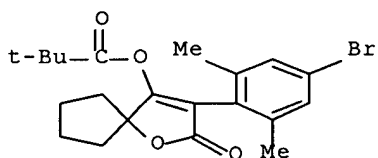
RN 186747-97-7 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



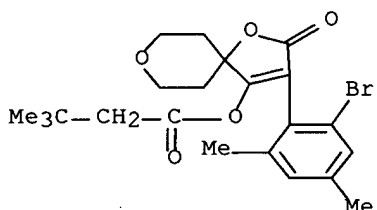
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CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



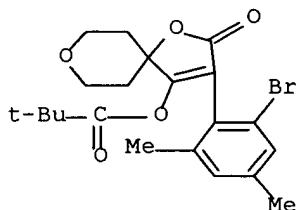
RN 186747-99-9 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



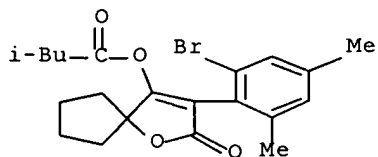
RN 186748-00-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



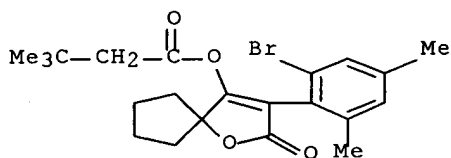
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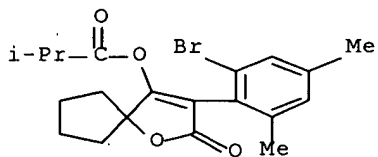
RN 186748-02-7 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



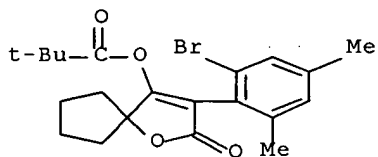
RN 186748-03-8 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



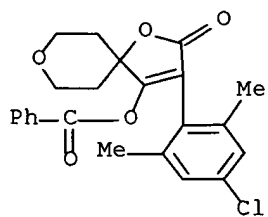
RN 186748-04-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4,6-dimethylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



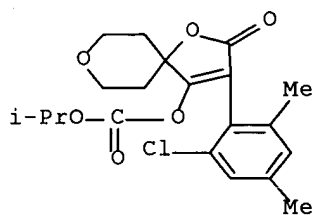
RN 186748-05-0 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 4-(benzoyloxy)-3-(4-chloro-2,6-dimethylphenyl)- (9CI) (CA INDEX NAME)



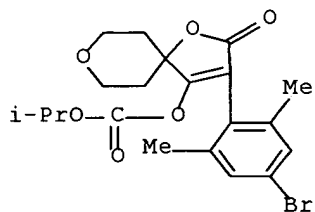
RN 186748-06-1 CAPLUS

CN Carbonic acid, 3-(2-chloro-4,6-dimethylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



RN 186748-07-2 CAPLUS

CN Carbonic acid, 3-(4-bromo-2,6-dimethylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



L9 ANSWER 52 OF 186 CAPLUS COPYRIGHT 2003 ACS

AN 1997:140239 CAPLUS

DN 126:144113

TI Preparation of 3-phenylheterocycloalkyl-2,4-dione enols as herbicides and

pesticides

IN Lieb, Folker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; Santel, Hans-Joachim; Dollinger, Markus; Graff, Alan; Mencke, Norbert; Turberg, Andreas; Dahmen, Peter

PA Bayer A.-G., Germany

SO Ger. Offen., 94 pp.

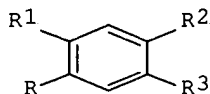
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DT Patent

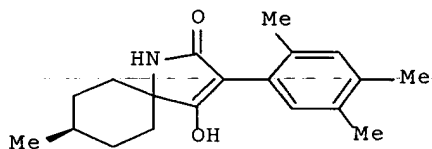
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19602524	A1	19970102	DE 1996-19602524	19960125
	WO 9701535	A1	19970116	WO 1996-EP2606	19960617
	W:	AU, BB, BG, BR, BY, CA, CN, CZ, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, TR, UA, US			
	RW:	AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9663042	A1	19970130	AU 1996-63042	19960617
	AU 709848	B2	19990909		
	EP 837847	A1	19980429	EP 1996-922005	19960617
	EP 837847	B1	20020918		
	R:	BE, CH, DE, ES, FR, GB, GR, IT, LI, NL			
	CN 1198154	A	19981104	CN 1996-196513	19960617
	BR 9609250	A	19990518	BR 1996-9250	19960617
	JP 11508880	T2	19990803	JP 1996-504136	19960617
	RU 2195449	C2	20021227	RU 1998-101701	19960617
	ES 2180786	T3	20030216	ES 1996-922005	19960617
	ZA 9605465	A	19970124	ZA 1996-5465	19960627
	TW 476754	B	20020221	TW 1996-85107720	19960627
	US 6110872	A	20000829	US 1997-983028	19971222
	US 6511942	B1	20030128	US 2000-496616	20000202
PRAI	DE 1995-19523471	A1	19950628		
	DE 1996-19602524	A	19960125		
	WO 1996-EP2606	W	19960617		
	US 1997-983028	A3	19971222		
OS	MARPAT 126:144113				
GI					



I



II

AB Title compds. [I; R = 4-(O-acyl)hydroxy-2-oxo-3-pyrrolinyl, 2,5-dihydro-3-furyl, 2,5-dihydro-3-thienyl, etc.; R1 = halo, alkyl, alkoxy, etc.; R2 = H, halo, alkyl, alkoxy, etc.; R3 = halo, alkyl, alkoxy,

etc.] were prepd. Thus, 2,4,5-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H (prepn. given) was amidated

by Me cis-1-amino-4-methylcyclohexanecarboxylate and the product cyclized

to give title compd. II. Data for biol. activity of I were given.

IT 186647-66-5P 186647-67-6P 186647-68-7P

186647-69-8P 186647-70-1P 186647-71-2P

186647-72-3P 186647-73-4P 186647-74-5P

186647-75-6P 186647-76-7P 186647-77-8P

186647-78-9P 186647-79-0P 186647-80-3P

186647-81-4P 186647-82-5P 186647-83-6P

186647-85-8P 186647-86-9P 186647-88-1P

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186647-96-1P 186647-97-2P 186647-98-3P

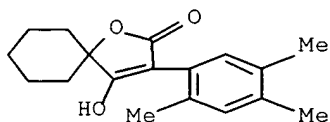
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of 3-phenylheterocycloalkyl-2,4-dione enols as herbicides and pesticides)

RN 186647-66-5 CAPLUS

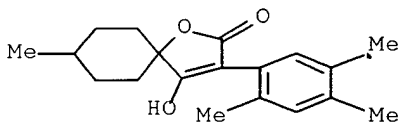
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,5-trimethylphenyl)- (9CI)

(CA INDEX NAME)



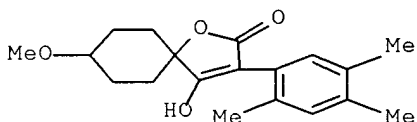
RN 186647-67-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methyl-3-(2,4,5-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 186647-68-7 CAPLUS

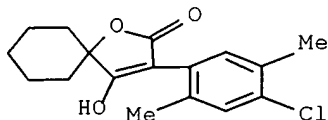
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methoxy-3-(2,4,5-trimethylphenyl)- (9CI) (CA INDEX NAME)





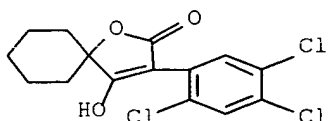
RN 186647-69-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-chloro-2,5-dimethylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



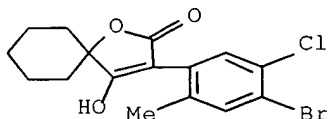
RN 186647-70-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,5-trichlorophenyl)-  
(9CI) (CA INDEX NAME)



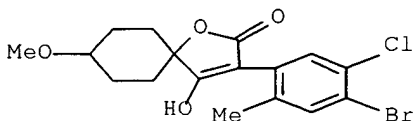
RN 186647-71-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-5-chloro-2-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



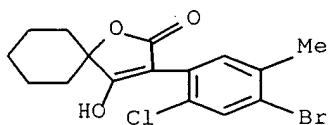
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CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-5-chloro-2-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



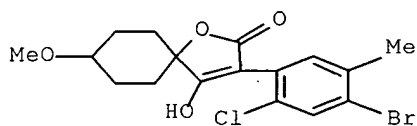
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CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-chloro-5-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



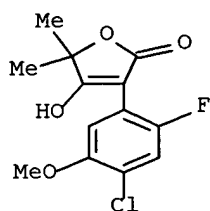
RN 186647-74-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-chloro-5-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



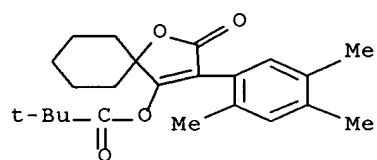
RN 186647-75-6 CAPLUS

CN 2(5H)-Furanone, 3-(4-chloro-2-fluoro-5-methoxyphenyl)-4-hydroxy-5,5-dimethyl- (9CI) (CA INDEX NAME)



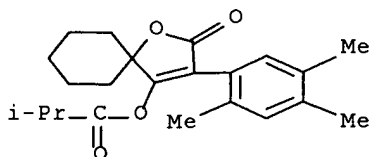
RN 186647-76-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,5-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



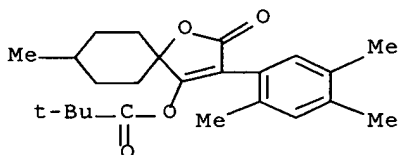
RN 186647-77-8 CAPLUS

CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,4,5-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



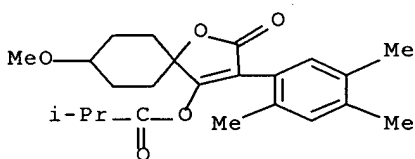
RN 186647-78-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methyl-2-oxo-3-(2,4,5-trimethylphenyl)-  
1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



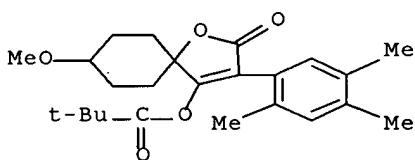
RN 186647-79-0 CAPLUS

CN Propanoic acid, 2-methyl-, 8-methoxy-2-oxo-3-(2,4,5-trimethylphenyl)-1-  
oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



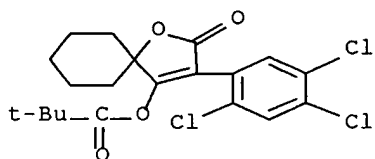
RN 186647-80-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,4,5-  
trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



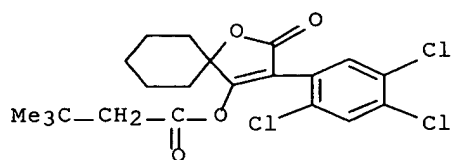
RN 186647-81-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,5-trichlorophenyl)-1-  
oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



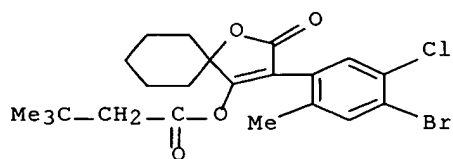
RN 186647-82-5 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 2-oxo-3-(2,4,5-trichlorophenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



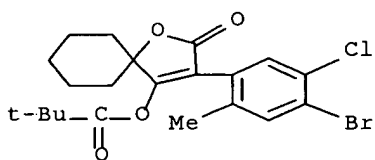
RN 186647-83-6 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-5-chloro-2-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



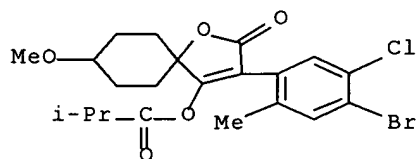
RN 186647-85-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-5-chloro-2-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



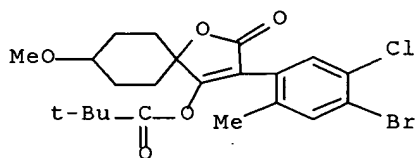
RN 186647-86-9 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(4-bromo-5-chloro-2-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



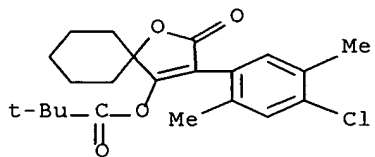
RN 186647-88-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-5-chloro-2-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



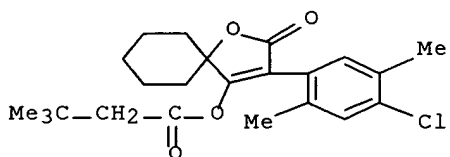
RN 186647-90-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-chloro-2,5-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



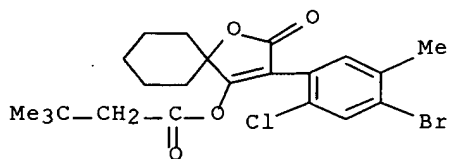
RN 186647-92-7 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-chloro-2,5-dimethylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



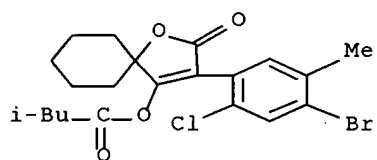
RN 186647-94-9 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(4-bromo-2-chloro-5-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



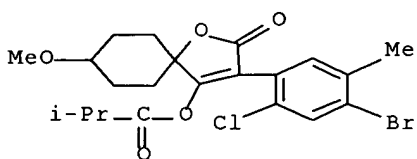
RN 186647-96-1 CAPLUS

CN Butanoic acid, 3-methyl-, 3-(4-bromo-2-chloro-5-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



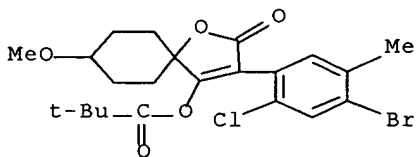
RN 186647-97-2 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(4-bromo-2-chloro-5-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 186647-98-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2-chloro-5-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



L9 ANSWER 53 OF 186 CAPLUS COPYRIGHT 2003 ACS  
AN 1997:41800 CAPLUS  
DN 126:74741  
TI Alkyl dihalogenated phenyl-substituted keto enols useful as pesticides  
and

herbicides  
IN Lieb, Folker; Hagemann, Hermann; Widdig, Arno; Ruther, Michael; Fischer,  
Reiner; Bretschneider, Thomas; Erdelen, Christoph; Wachendorff-Neumann,  
Ulrike; Dahmen, Peter; Dollinger, Markus; Santel, Hans-Joachim; et al.  
PA Bayer A.-G., Germany; Lieb, Folker; Hagemann, Hermann; Widdig, Arno;  
Ruther, Michael; Fischer, Reiner; Bretschneider, Thomas; Erdelen,  
Christoph; Wachendorff-Neumann, Ulrike; et al.

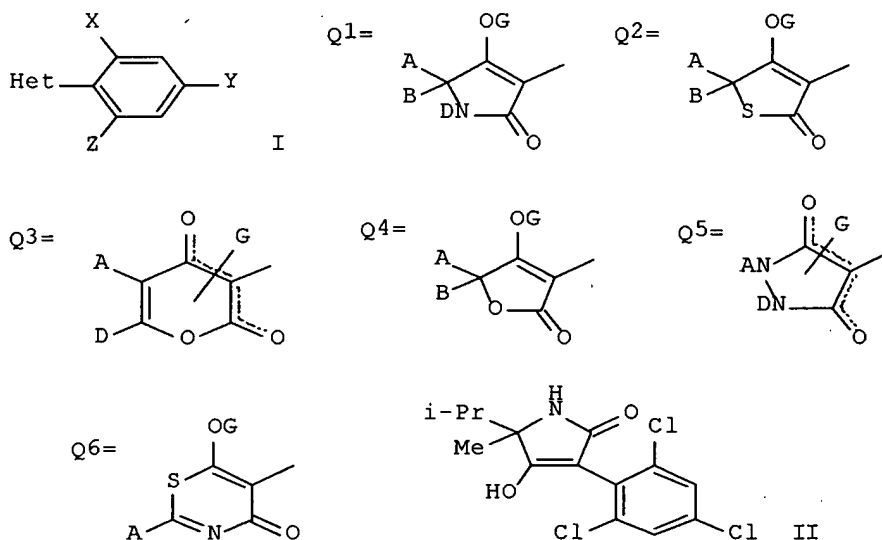
SO PCT Int. Appl., 231 pp.  
CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9635664	A1	19961114	WO 1996-EP1781	19960429
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	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
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	EP 825982	A1	19980304	EP 1996-914146	19960429
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	BR 9608229	A	19981229	BR 1996-8229	19960429
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	ZA 9603633	A	19961125	ZA 1996-3633	19960508
	US 6316486	B1	20011113	US 1997-945664	19971031
	US 6380246	B1	20020430	US 1999-404424	19990923
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	DE 1995-19545467	A	19951206		
	WO 1996-EP1781	W	19960429		
	US 1997-945664	B3	19971031		
OS	MARPAT 126:74741				
GI					



AB Title compds. I [X = halo, Y, Z = halo or alkyl, provided that 1 of Y and

Z always = halo, and the other = alkyl; Het = 1 of the heterocyclic groups

Q1-Q6; A = H, (halo)alkyl, alkenyl, alkoxyalkyl, (un)substituted cycloalkyl or heterocyclyl, etc.; B = H, alkyl, alkoxyalkyl; D = H, (un)substituted alk(en/yn)yl, alkoxyalkyl, cycloalkyl, aralkyl, heterocyclyl, aryl, etc.; A and B, or A and D, may form (un)substituted carbo- or heterocyclic rings; G = various acyl, sulfonyl, or phosphoryl substituents, or metal or ammonium ions] are prepd. Also disclosed are several processes for prepg. the compds., and their use as pesticides

and

herbicides. For example, amidation of 2,4-dichloro-6-methylphenylacetic acid with H<sub>2</sub>NC(Me)(i-Pr)CN via the acid chloride using SOCl<sub>2</sub> (81%), followed by alcoholysis of the nitrile using H<sub>2</sub>SO<sub>4</sub> and MeOH quench

(73%),

and cyclization of the resultant ester with KOBu-tert in THF (73%), gave title compd. II. In a test against *Myzus persicae* at 0.1%, II gave 100% kill in 6 days. At 250 g/ha preemergence, selected I gave 80-100% kill

of

4 weeds with 0-50% damage to *Beta vulgaris*.

IT **185151-67-1P**

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation);

RACT

(Reactant or reagent); USES (Uses)

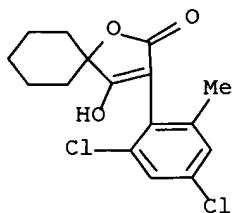
(prepn. of alkyldihalophenyl-substituted keto enols as pesticides and herbicides)

RN 185151-67-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichloro-6-methylphenyl)-4-hydroxy-

(9CI) (CA INDEX NAME)



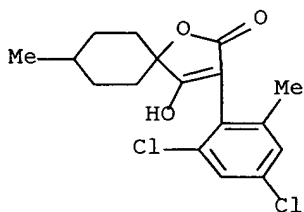


IT 185151-68-2P 185151-69-3P 185151-70-6P  
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 185152-30-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of alkylidihalophenyl-substituted keto enols as pesticides and herbicides)

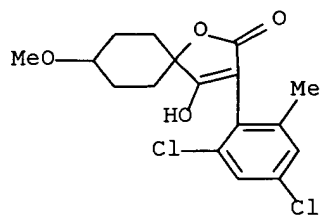
RN 185151-68-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichloro-6-methylphenyl)-4-hydroxy-8-methyl- (9CI) (CA INDEX NAME)



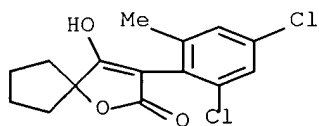
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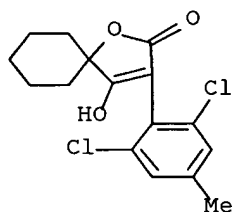
RN 185151-70-6 CAPLUS

CN 1-Oxaspiro[4.4]non-3-en-2-one, 3-(2,4-dichloro-6-methylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



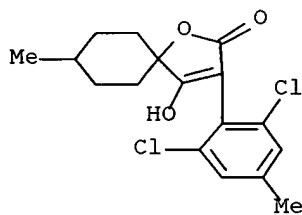
RN 185151-71-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,6-dichloro-4-methylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



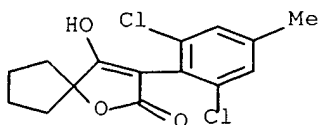
RN 185151-72-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,6-dichloro-4-methylphenyl)-4-hydroxy-8-methyl- (9CI) (CA INDEX NAME)



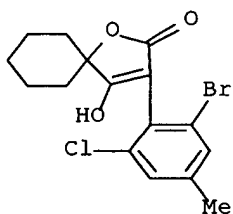
RN 185151-73-9 CAPLUS

CN 1-Oxaspiro[4.4]non-3-en-2-one, 3-(2,6-dichloro-4-methylphenyl)-4-hydroxy-  
(9CI) (CA INDEX NAME)



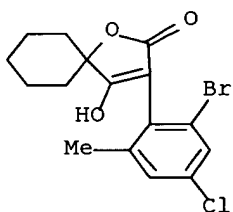
RN 185151-74-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-bromo-4-chloro-4-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



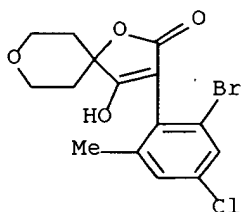
RN 185151-75-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2-bromo-4-chloro-6-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



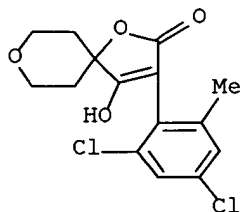
RN 185151-76-2 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 3-(2-bromo-4-chloro-6-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



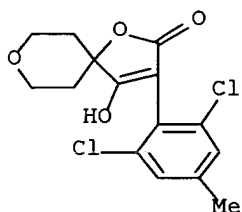
RN 185151-77-3 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichloro-6-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



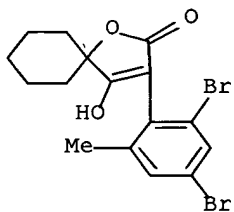
RN 185151-78-4 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 3-(2,6-dichloro-4-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



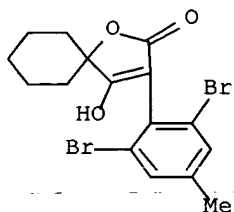
RN 185151-79-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dibromo-6-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



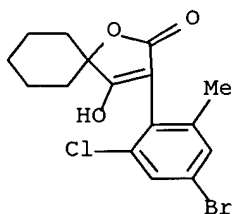
RN 185151-80-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,6-dibromo-4-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



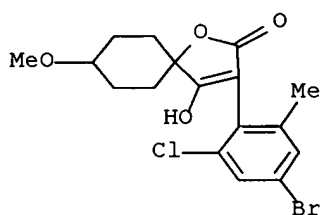
RN 185151-81-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-chloro-6-methylphenyl)-4-hydroxy- (9CI) (CA INDEX NAME)



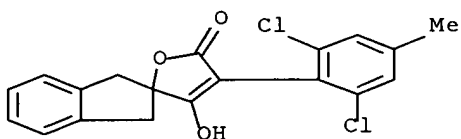
RN 185151-82-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(4-bromo-2-chloro-6-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)



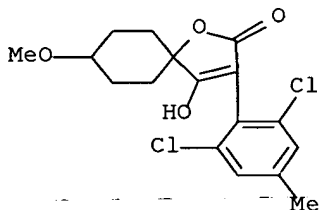
RN 185151-83-1 CAPLUS

CN Spiro[furan-2(5H),2'-[2H]inden]-5-one, 4-(2,6-dichloro-4-methylphenyl)-1',3'-dihydro-3-hydroxy- (9CI) (CA INDEX NAME)



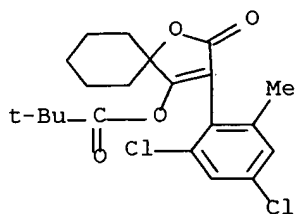
RN 185151-84-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,6-dichloro-4-methylphenyl)-4-hydroxy-8-methoxy- (9CI) (CA INDEX NAME)

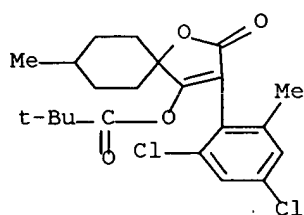


RN 185151-85-3 CAPLUS

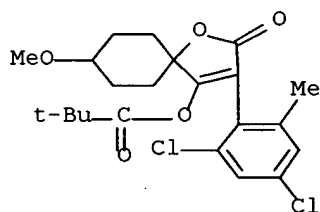
CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



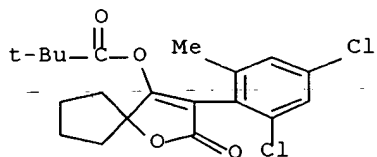
RN 185151-86-4 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 185151-87-5 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

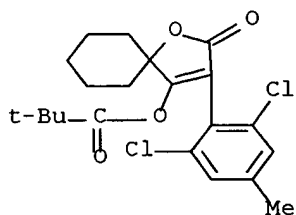


RN 185151-88-6 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



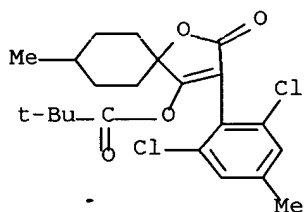
RN 185151-89-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



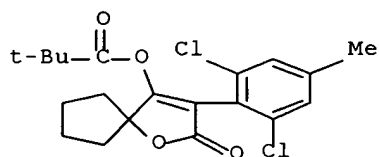
RN 185151-91-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



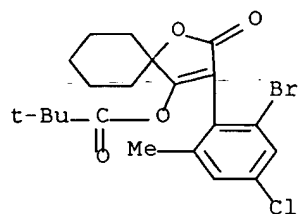
RN 185151-93-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)

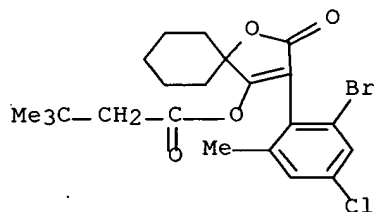


RN 185151-94-4 CAPLUS

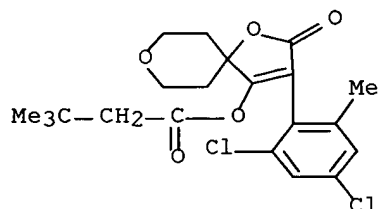
CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



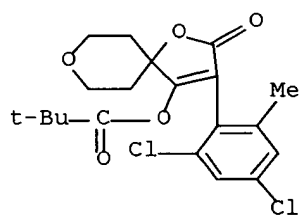
RN 185151-96-6 CAPLUS  
 CN Butanoic acid, 3,3-dimethyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 185151-98-8 CAPLUS  
 CN Butanoic acid, 3,3-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

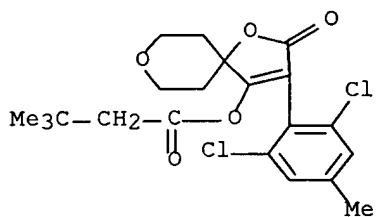


RN 185152-00-5 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



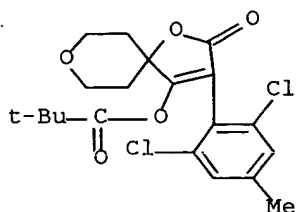
RN 185152-01-6 CAPLUS  
 CN Butanoic acid, 3,3-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





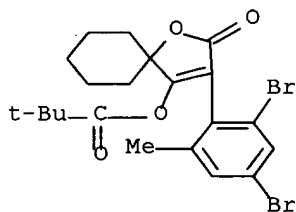
RN 185152-02-7 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



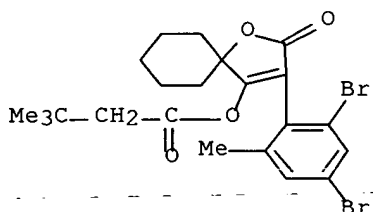
RN 185152-03-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dibromo-6-methylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



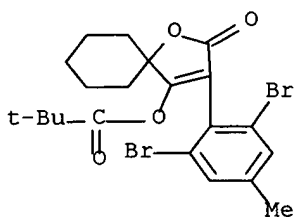
RN 185152-04-9 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2,4-dibromo-6-methylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



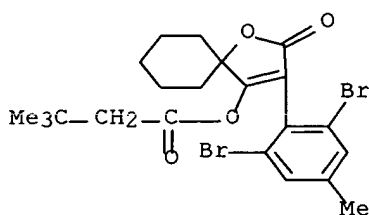
RN 185152-05-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,6-dibromo-4-methylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



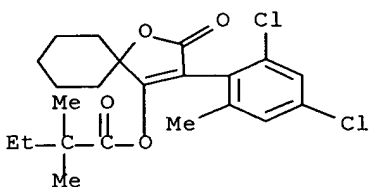
RN 185152-07-2 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2,6-dibromo-4-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



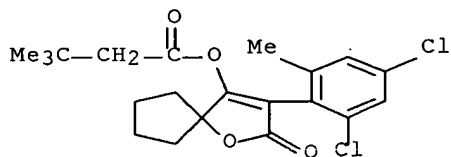
RN 185152-08-3. CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



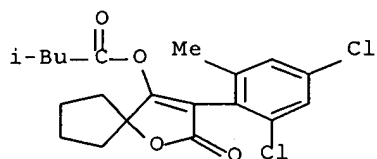
RN 185152-09-4 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



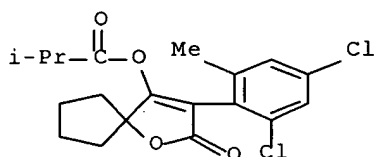
RN 185152-11-8 CAPLUS

CN Butanoic acid, 3-methyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



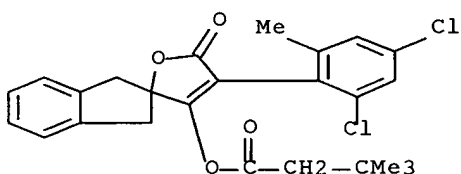
RN 185152-12-9 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,4-dichloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



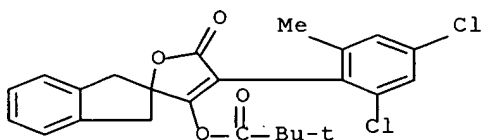
RN 185152-13-0 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 4-(2,4-dichloro-6-methylphenyl)-1',3'-dihydro-5-oxospiro[furan-2(5H),2'-[2H]inden]-3-yl ester (9CI) (CA INDEX NAME)



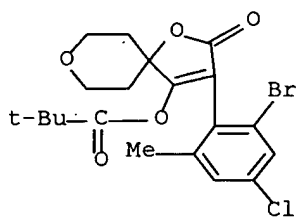
RN 185152-14-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-(2,4-dichloro-6-methylphenyl)-1',3'-dihydro-5-oxospiro[furan-2(5H),2'-[2H]inden]-3-yl ester (9CI) (CA INDEX NAME)



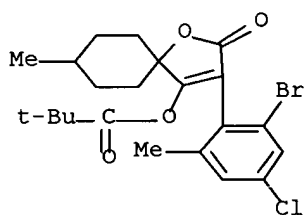
RN 185152-15-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-2-oxo-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



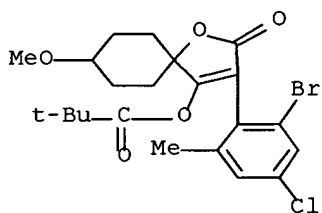
RN 185152-16-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-8-methyl-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



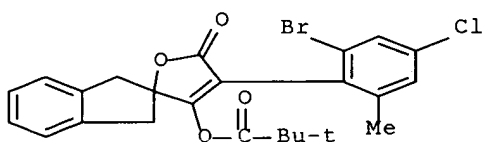
RN 185152-17-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-4-chloro-6-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



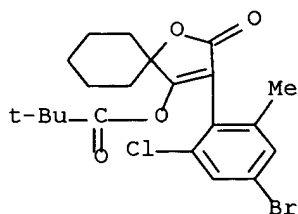
RN 185152-18-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-(2-bromo-4-chloro-6-methylphenyl)-1',3'-dihydro-5-oxospiro[furan-2(5H),2'-[2H]inden]-3-yl ester (9CI) (CA INDEX NAME)



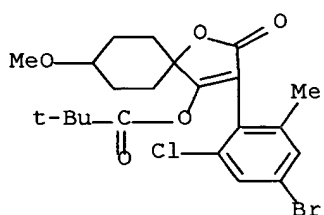
RN 185152-19-6 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2-chloro-6-methylphenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



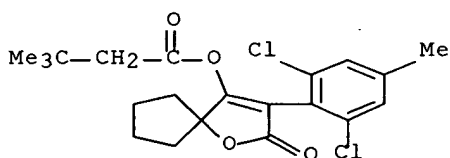
RN 185152-20-9 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(4-bromo-2-chloro-6-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



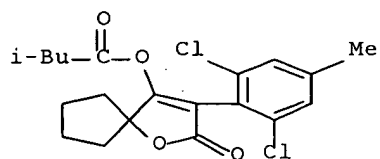
RN 185152-21-0 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



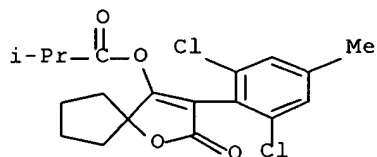
RN 185152-22-1 CAPLUS

CN Butanoic acid, 3-methyl-, 3-(2,6-dichloro-4-methylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



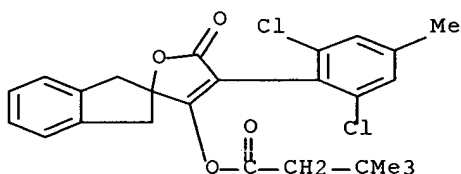
RN 185152-23-2 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,6-dichloro-4-methylphenyl)-2-oxo-1-oxaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



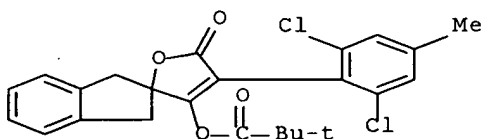
RN 185152-24-3 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 4-(2,6-dichloro-4-methylphenyl)-1',3'-dihydro-5-oxospiro[furan-2(5H),2'-[2H]inden]-3-yl ester (9CI) (CA INDEX NAME)



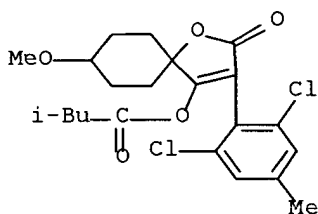
RN 185152-25-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-(2,6-dichloro-4-methylphenyl)-1',3'-dihydro-5-oxospiro[furan-2(5H),2'-[2H]inden]-3-yl ester (9CI) (CA INDEX NAME)



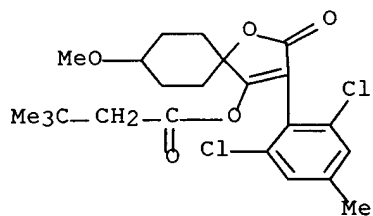
RN 185152-26-5 CAPLUS

CN Butanoic acid, 3-methyl-, 3-(2,6-dichloro-4-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 185152-27-6 CAPLUS

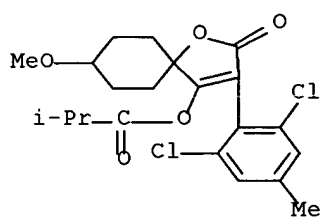
CN Butanoic acid, 3,3-dimethyl-, 3-(2,6-dichloro-4-methylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 185152-28-7 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,6-dichloro-4-methylphenyl)-8-methoxy-2-oxo-

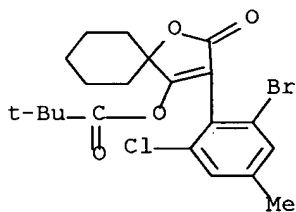
1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 185152-30-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2-bromo-6-chloro-4-methylphenyl)-2-oxo-1-

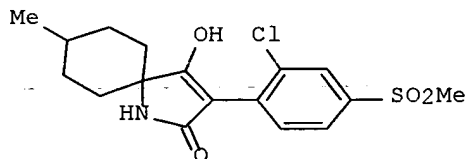
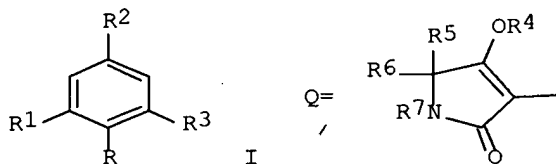
oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



App's

L9 ANSWER 54 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1996:577745 CAPLUS  
 DN 125:221568  
 TI Preparation of 3-phenyl-2,4-dioxopyrrolidine tautomers and analogs as herbicides and pesticides  
 IN Fischer, Reiner; Bretschneider, Thomas; Hagemann, Hermann; Lieb, Folker; Lui, Norbert; Ruther, Michael; Widdig, Arno; Erdelen, Christoph; Wachendorff-Neumann, Ulrike; et al.  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 94 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19543864	A1	19960814	DE 1995-19543864	19951124
	WO 9625395	A1	19960822	WO 1996-EP382	19960131
	W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9647158	A1	19960904	AU 1996-47158	19960131
	BR 9606956	A	19971028	BR 1996-6956	19960131
	EP 809629	A1	19971203	EP 1996-902951	19960131
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
	CN 1173866	A	19980218	CN 1996-191907	19960131
	JP 11500114	T2	19990106	JP 1996-524608	19960131
	ZA 9601107	A	19960828	ZA 1996-1107	19960212
	US 6358887	B1	20020319	US 1997-875872	19970805
	US 2003045432	A1	20030306	US 2001-14713	20011211
PRAI	DE 1995-19504621	A1	19950213		
	DE 1995-19543864	A	19951124		
	WO 1996-EP382	W	19960131		
	US 1997-875872	A3	19970805		
OS	MARPAT 125:221568				
GI					



II



AB Title compds. [I; R = oxopyrrolinyl group Q; R1 = halo, alkyl, alkoxy, Ph, etc.; R2,R3 = H, halo, alkyl, alkoxy, etc.; R4 = H, alkanoyl, alkoxy carbonyl, etc.; R5 = H, alkyl, (hetero)aryl, etc.; R6 = H, (alkoxy)alkyl; R5R6 = atoms to form a ring; R7 = H, alkyl, (hetero)aryl, etc.; R6R7 = atoms to form a ring] were prepd. Thus, 2,4-

Cl(MeO2S)C6H3Me

was converted in 3 steps to 2,4-Cl(MeO2S)C6H3CH2CO2H which was amidated by Me 1-amino-4-methylcyclohexanecarboxylate and the product cyclized to give

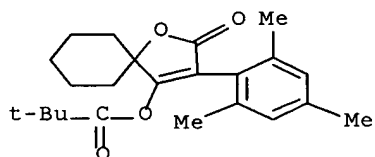
title compd. II. The latter gave complete control of Nephotettix cinctipes on rice seedlings at 0.1%.

IT 148476-66-8P 181299-98-9P 181299-99-0P  
181300-00-5P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 3-phenyl-2,4-dioxypyrrolidine tautomers and analogs as herbicides and pesticides)

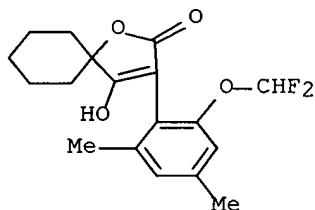
RN 148476-66-8 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



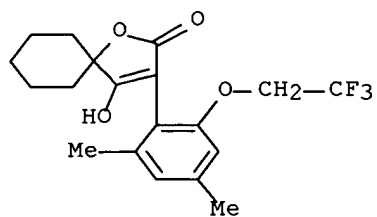
RN 181299-98-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-[2-(difluoromethoxy)-4,6-dimethylphenyl]-4-hydroxy- (9CI) (CA INDEX NAME)



RN 181299-99-0 CAPLUS

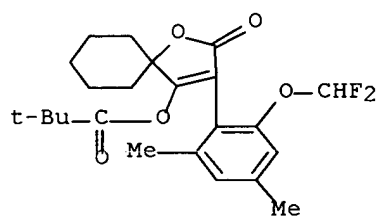
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-[2,4-dimethyl-6-(2,2,2-trifluoroethoxy)phenyl]-4-hydroxy- (9CI) (CA INDEX NAME)



RN 181300-00-5 CAPLUS

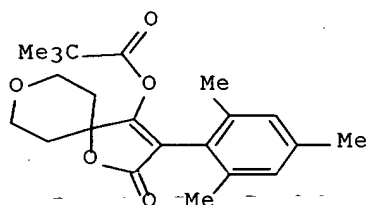
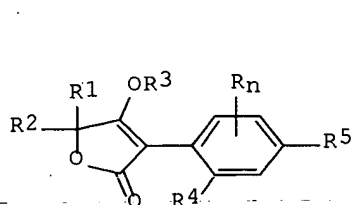
CN Propanoic acid, 2,2-dimethyl-, 3-[2-(difluoromethoxy)-4,6-dimethylphenyl]-

2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



L9 ANSWER 55 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1996:479268 CAPLUS  
 DN 125:142528  
 TI Preparation of alkanoyloxyfuranones as pesticides  
 IN Fischer, Reiner; Bretschneider, Thomas; Beck, Gunther; Hagemann, hermann;  
 Erdelen, Christoph; Wachendorff-Neumann, Ulride; Andersch, Wolfram;  
 Mencke, Norbert; Turbert, Andreas  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 53 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19540736	A1	19960627	DE 1995-19540736	19951102
	CA 2208375	AA	19960704	CA 1995-2208375	19951211
	WO 9620196	A1	19960704	WO 1995-EP4869	19951211
	W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, UA, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9643420	A1	19960719	AU 1996-43420	19951211
	EP 799228	A1	19971008	EP 1995-942100	19951211
	EP 799228	B1	20030319		
	R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT				
	BR 9510256	A	19971104	BR 1995-10256	19951211
	CN 1175257	A	19980304	CN 1995-197629	19951211
	CN 1079798	B	20020227		
	HU 77880	A2	19980928	HU 1998-1213	19951211
	JP 10511366	T2	19981104	JP 1995-520148	19951211
	ZA 9510888	A	19960624	ZA 1995-10888	19951221
	US 5830825	A	19981103	US 1997-860106	19970617
	US 6051723	A	20000418	US 1998-133522	19980813
PRAI	DE 1994-4446335	A1	19941223		
	DE 1995-19540736	A	19951102		
	WO 1995-EP4869	W	19951211		
OS	MARPAT 125:142528				
GI					



AB Title compds. (I; R, R4, R5 = halo, alkyl, alkoxy; R1R2 = atoms to form a heterocyclic ring; R3 = H, alkanoyl, alkylsulfonyl, alkoxycarbonyl,

etc.;

n = 0-3) were prepd. Thus, Et 4-hydroxytetrahydropyran-4-carboxylate was

esterified by mesitylacetyl chloride and the product cyclized to give, after Me<sub>3</sub>CCOCl esterification, title compd. II which gave .gtoreq.95%

kill

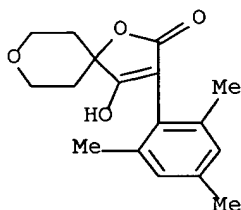
of Myzus persicae at 0.1%.

IT 179635-07-5P 179635-08-6P 179635-09-7P  
179635-10-0P 179635-11-1P 179635-12-2P  
179635-13-3P 179635-14-4P 179635-15-5P  
179635-16-6P 179635-17-7P 179635-18-8P  
179635-19-9P 179635-20-2P 179635-21-3P  
179635-22-4P 179635-23-5P 179635-24-6P  
179635-25-7P 179635-26-8P 179635-27-9P  
179635-28-0P 179635-29-1P 179635-30-4P  
179635-31-5P 179635-32-6P 179635-33-7P  
179635-34-8P 179635-35-9P 179635-36-0P  
179635-37-1P 179635-38-2P 179635-39-3P  
179635-40-6P 179635-41-7P 179635-42-8P  
179635-43-9P 179635-44-0P 179635-45-1P  
179635-46-2P 179635-47-3P 179635-48-4P  
179635-49-5P 179635-50-8P 179635-51-9P  
179635-52-0P 179635-53-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(prepn. of alkanoyloxyfuranones as pesticides)

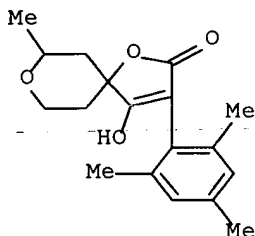
RN 179635-07-5 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)-  
(9CI) (CA INDEX NAME)



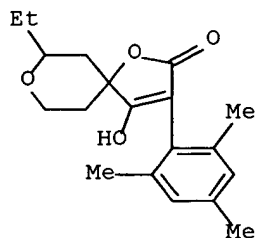
RN 179635-08-6 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-7-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



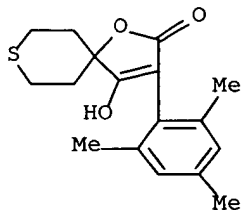
RN 179635-09-7 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 7-ethyl-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



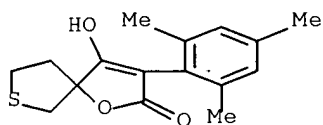
RN 179635-10-0 CAPLUS

CN 1-Oxa-8-thiaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



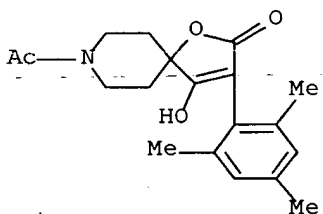
RN 179635-11-1 CAPLUS

CN 1-Oxa-7-thiaspiro[4.4]non-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

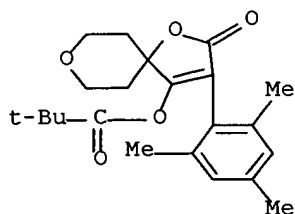


RN 179635-12-2 CAPLUS

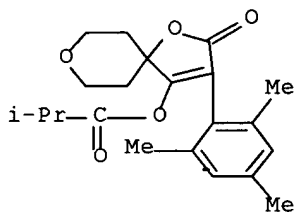
CN 1-Oxa-8-azaspiro[4.5]dec-3-en-2-one, 8-acetyl-4-hydroxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



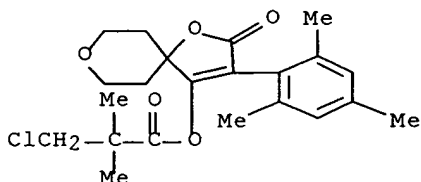
RN 179635-13-3 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



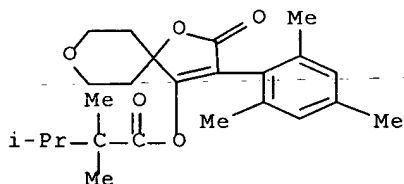
RN 179635-14-4 CAPLUS  
 CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 179635-15-5 CAPLUS  
 CN Propanoic acid, 3-chloro-2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

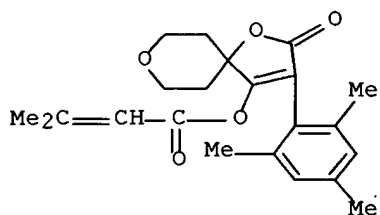


RN 179635-16-6 CAPLUS  
 CN Butanoic acid, 2,2,3-trimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



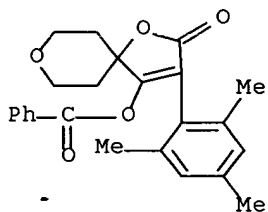
RN 179635-17-7 CAPLUS

CN 2-Butenoic acid, 3-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



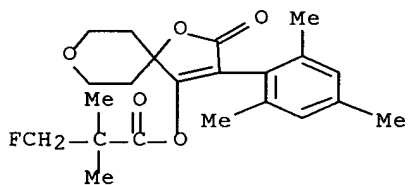
RN 179635-18-8 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 4-(benzoyloxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



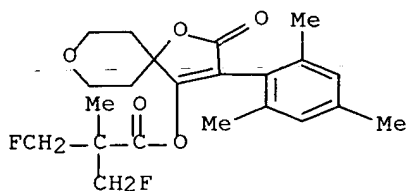
RN 179635-19-9 CAPLUS

CN Propanoic acid, 3-fluoro-2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



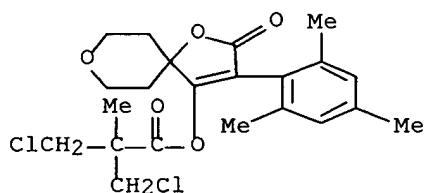
RN 179635-20-2 CAPLUS

CN Propanoic acid, 3-fluoro-2-(fluoromethyl)-2-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



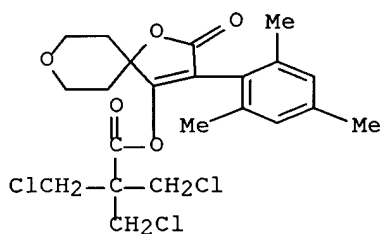
RN 179635-21-3 CAPLUS

CN Propanoic acid, 3-chloro-2-(chloromethyl)-2-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



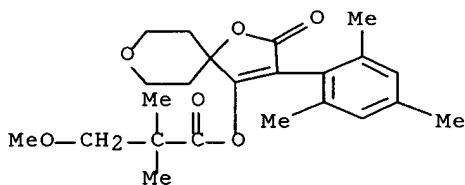
RN 179635-22-4 CAPLUS

CN Propanoic acid, 3-chloro-2,2-bis(chloromethyl)-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 179635-23-5 CAPLUS

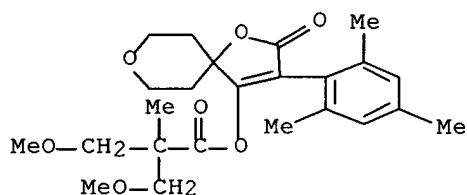
CN Propanoic acid, 3-methoxy-2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 179635-24-6 CAPLUS

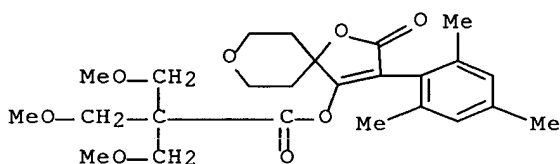
CN Propanoic acid, 3-methoxy-2-(methoxymethyl)-2-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





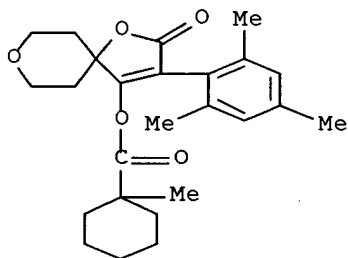
RN 179635-25-7 CAPLUS

CN Propanoic acid, 3-methoxy-2,2-bis(methoxymethyl)-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



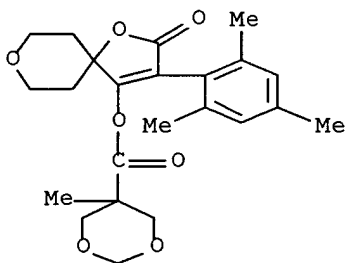
RN 179635-26-8 CAPLUS

CN Cyclohexanecarboxylic acid, 1-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



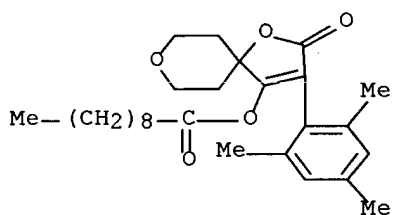
RN 179635-27-9 CAPLUS

CN 1,3-Dioxane-5-carboxylic acid, 5-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



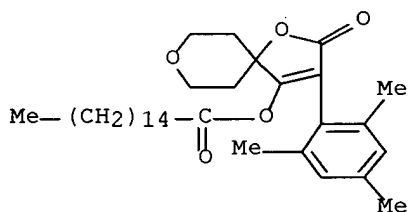
RN 179635-28-0 CAPLUS

CN Decanoic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



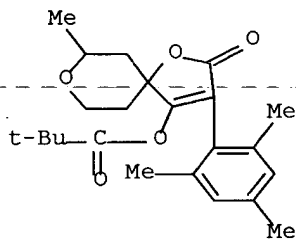
RN 179635-29-1 CAPLUS

CN Hexadecanoic acid, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

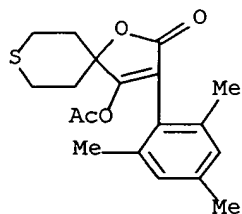


RN 179635-30-4 CAPLUS

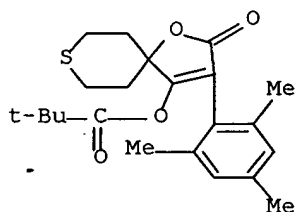
CN Propanoic acid, 2,2-dimethyl-, 7-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



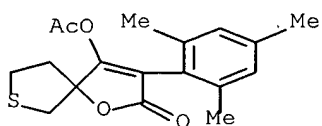
RN 179635-31-5 CAPLUS  
 CN 1-Oxa-8-thiaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



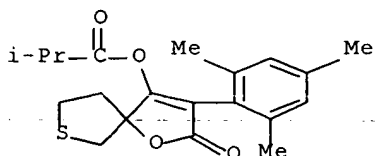
RN 179635-32-6 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxa-8-thiaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 179635-33-7 CAPLUS  
 CN 1-Oxa-7-thiaspiro[4.4]non-3-en-2-one, 4-(acetyloxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

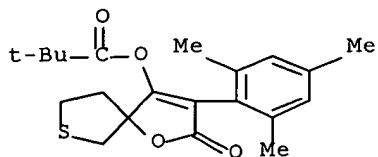


RN 179635-34-8 CAPLUS  
 CN Propanoic acid, 2-methyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxa-7-thiaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 179635-35-9 CAPLUS  
 CN Propanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxa-7-

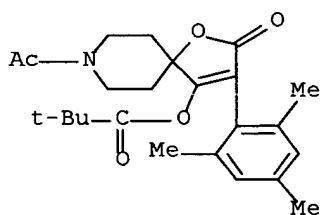
thiaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 179635-36-0 CAPLUS

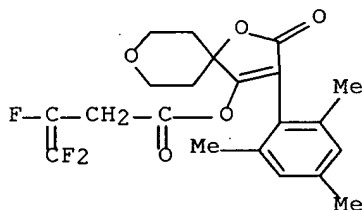
CN Propanoic acid, 2,2-dimethyl-, 8-acetyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-

oxa-8-azaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 179635-37-1 CAPLUS

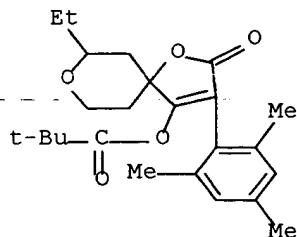
CN 3-Butenoic acid, 3,4,4-trifluoro-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 179635-38-2 CAPLUS

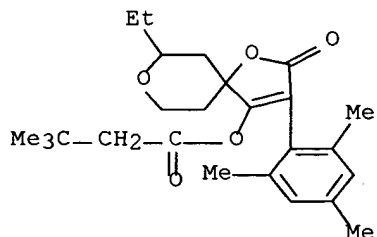
CN Propanoic acid, 2,2-dimethyl-, 7-ethyl-2-oxo-3-(2,4,6-trimethylphenyl)-1,8-

dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



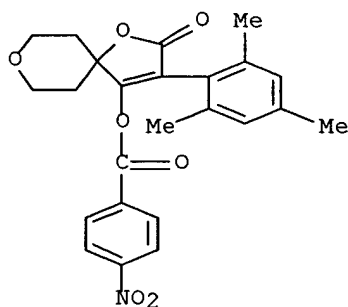
RN 179635-39-3 CAPLUS

CN Butanoic acid, 3,3-dimethyl-, 7-ethyl-2-oxo-3-(2,4,6-trimethylphenyl)-  
1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



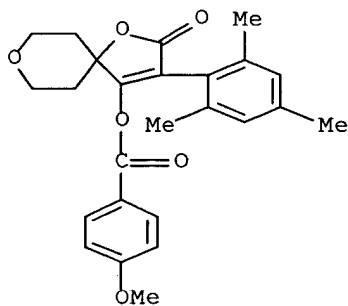
RN 179635-40-6 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 4-[(4-nitrobenzoyl)oxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



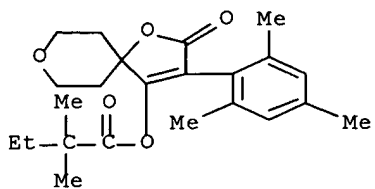
RN 179635-41-7 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



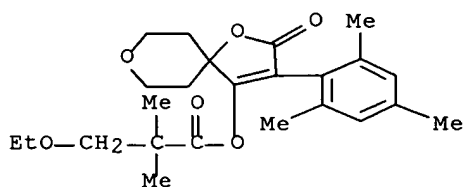
RN 179635-42-8 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



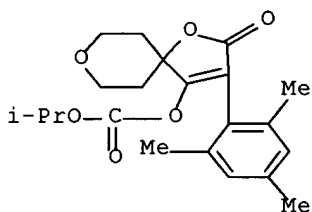
RN 179635-43-9 CAPLUS

CN Propanoic acid, 3-ethoxy-2,2-dimethyl-, 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



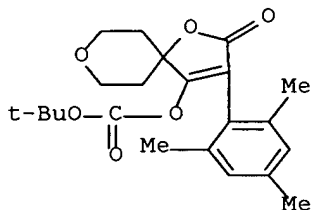
RN 179635-44-0 CAPLUS

CN Carbonic acid, 1-methylethyl 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



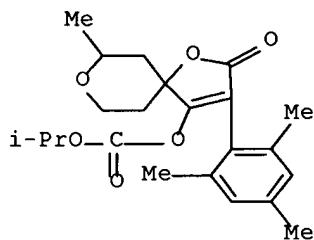
RN 179635-45-1 CAPLUS

CN Carbonic acid, 1,1-dimethylethyl 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



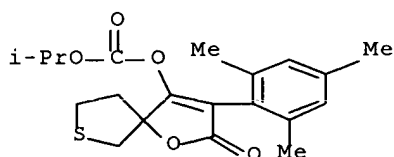
RN 179635-46-2 CAPLUS

CN Carbonic acid, 1-methylethyl 7-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



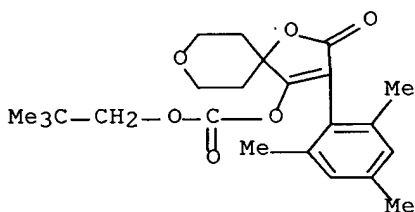
RN 179635-47-3 CAPLUS

CN Carbonic acid, 1-methylethyl 2-oxo-3-(2,4,6-trimethylphenyl)-1-oxa-7-thiaspiro[4.4]non-3-en-4-yl ester (9CI) (CA INDEX NAME)



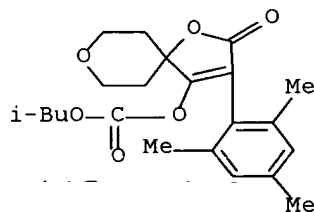
RN 179635-48-4 CAPLUS

CN Carbonic acid, 2,2-dimethylpropyl 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



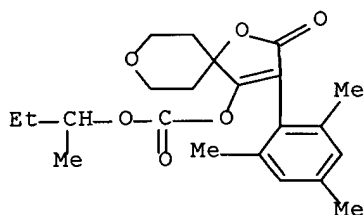
RN 179635-49-5 CAPLUS

CN Carbonic acid, 2-methylpropyl 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



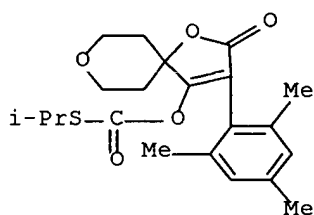
RN 179635-50-8 CAPLUS

CN Carbonic acid, 1-methylpropyl 2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



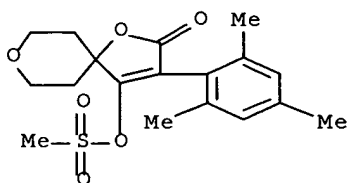
RN 179635-51-9 CAPLUS

CN Carbonothioic acid, S-(1-methylethyl) O-[2-oxo-3-(2,4,6-trimethylphenyl)-1,8-dioxaspiro[4.5]dec-3-en-4-yl] ester (9CI) (CA INDEX NAME)



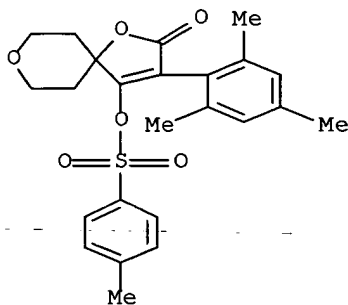
RN 179635-52-0 CAPLUS

CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 4-[(methylsulfonyl)oxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 179635-53-1 CAPLUS

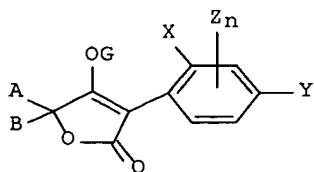
CN 1,8-Dioxaspiro[4.5]dec-3-en-2-one, 4-[[[(4-methylphenyl)sulfonyl]oxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



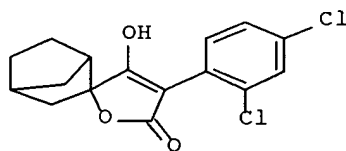


L9 ANSWER 57 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1995:638410 CAPLUS  
 DN 123:32947  
 TI Preparation of 3-aryl-4-hydroxy-.DELTA.3-dihydrofuranones as pesticides.  
 IN Fischer, Reiner; Krueger, Bernd Wieland; Santel, Hans-Joachim;  
 Dollinger,  
 Markus; Wachendorff-Neumann, Ulrike; Erdelen, Christoph; Erdelen,  
 Christoph Dr  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 116 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4337853	A1	19950323	DE 1993-4337853	19931105
	AU 9471599	A1	19950330	AU 1994-71599	19940831
	EP 647637	A1	19950412	EP 1994-113566	19940831
	EP 647637	B1	19990127		
	R: BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, PT				
	ES 2127859	T3	19990501	ES 1994-113566	19940831
	US 5610122	A	19970311	US 1994-303987	19940909
	ZA 9407183	A	19950511	ZA 1994-7183	19940916
	CN 1103642	A	19950614	CN 1994-115915	19940916
	CN 1061040	B	20010124		
	JP 07179450	A2	19950718	JP 1994-246807	19940916
	BR 9403768	A	19950516	BR 1994-3768	19940919
	US 5719310	A	19980217	US 1996-740974	19961105
	CN 1292375	A	20010425	CN 2000-101949	20000131
PRAI	DE 1993-4331672	A1	19930917		
	DE 1993-4337853	A	19931105		
	US 1994-303987	A3	19940909		
OS	MARPAT 123:32947				
GI					



I



II

AB Title compds. [I; X = alkyl, halo, alkoxy, haloalkyl; Y = H, alkyl,  
 halo,  
 alkoxy, haloalkyl; Z = alkyl, halo, alkoxy; n = 0-3; XZ = atoms to form  
 a  
 fused benzo ring; G = H, COR1, SO2R3, C(:L)MR2, P(:L)R4R5, metal ion,  
 ammonium, etc.; AB = atoms to form a (substituted) (unsatd.) ring which  
 can be interrupted by an O or S atom; R1 = (halo-substituted) alkyl,  
 alkenyl, alkoxyalkyl, alkylthioalkyl, polyalkoxyalkyl, cycloalkyl which

can be interrupted by heteroatoms, (substituted) Ph, phenylalkyl, heteroaryl, phenoxyalkyl, heteroaryloxyalkyl; R2 = (halo-substituted) alkyl, alkenyl, alkoxyalkyl, polyalkoxyalkyl, (substituted) Ph, PhCH2; R3-R5 = (halo-substituted) alkyl, alkoxy, alkylamino, dialkylamino, alkylthio, alkenylthio, alkynylthio, cycloalkylthio, (substituted) Ph, PhO, PhS], were prepd. Thus, Et 2-hydroxynorbornan-2-carboxylate was refluxed with 2,4-dichlorophenylacetyl chloride in PhMe and the

resulting

diester was stirred with KOCMe3 in DMF to give title compd. (II).

Several

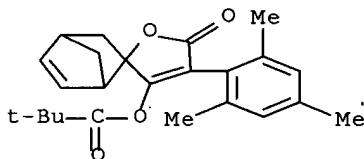
I at 0.001% gave .gtoreq.85% kill of Myzus persicae on cabbage leaves.

IT 148477-69-4P 164153-44-0P 164153-45-1P  
 164153-46-2P 164153-47-3P 164153-48-4P  
 164153-49-5P 164153-50-8P 164153-51-9P  
 164153-52-0P 164153-53-1P 164153-54-2P  
 164153-55-3P 164153-56-4P 164153-57-5P  
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 164153-98-4P 164153-99-5P 164154-00-1P  
 164154-01-2P 164154-02-3P 164154-03-4P  
 164154-04-5P 164154-05-6P 164154-06-7P  
 164154-07-8P 164154-08-9P 164154-09-0P  
 164154-10-3P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of 3-aryl-4-hydroxy-.DELTA.3-dihydrofuranones as pesticides)

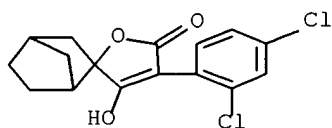
RN 148477-69-4 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]hept-5-ene-2,2' (5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



RN 164153-44-0 CAPLUS

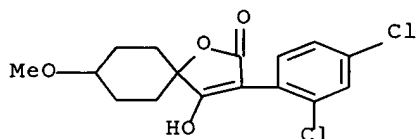
CN Spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-5'-one, 4'-(2,4-dichlorophenyl)-3'-hydroxy- (9CI) (CA INDEX NAME)



RN 164153-45-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-hydroxy-8-methoxy-

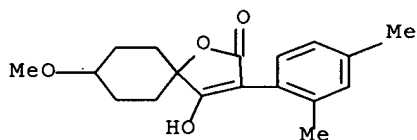
(9CI) (CA INDEX NAME)



RN 164153-46-2 CAPLUS

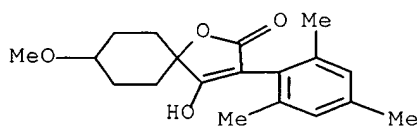
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dimethylphenyl)-4-hydroxy-8-methoxy-

(9CI) (CA INDEX NAME)



RN 164153-47-3 CAPLUS

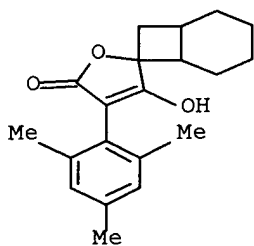
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-8-methoxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



RN 164153-48-4 CAPLUS

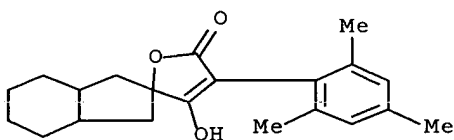
CN Spiro[bicyclo[4.2.0]octane-7,2'-(5'H)-furan]-5'-one, 3'-hydroxy-4'-(2,4,6-

trimethylphenyl)- (9CI) (CA INDEX NAME)



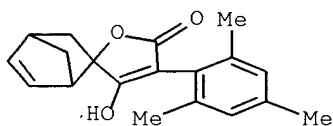
RN 164153-49-5 CAPLUS

CN Spiro[furan-2(5H), 2'-[2H]inden]-5-one, 1',3',3'a,4',5',6',7',7'a-octahydro-3-hydroxy-4-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



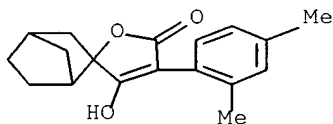
RN 164153-50-8 CAPLUS

CN Spiro[bicyclo[2.2.1]hept-5-ene-2,2'(5'H)-furan]-5'-one, 3'-hydroxy-4'-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



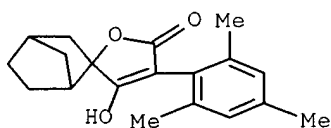
RN 164153-51-9 CAPLUS

CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 4'-(2,4-dimethylphenyl)-3'-hydroxy- (9CI) (CA INDEX NAME)



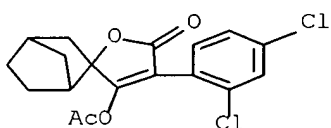
RN 164153-52-0 CAPLUS

CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 3'-hydroxy-4'-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



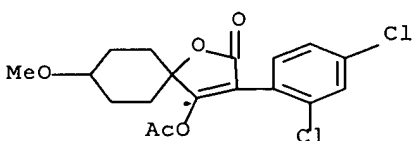
RN 164153-53-1 CAPLUS

CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 3'-(acetyloxy)-4'-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



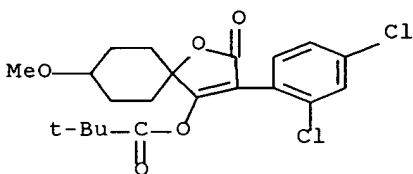
RN 164153-54-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-(2,4-dichlorophenyl)-8-methoxy- (9CI) (CA INDEX NAME)



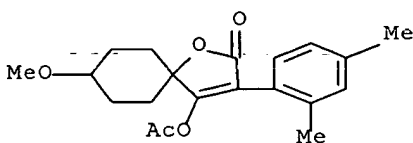
RN 164153-55-3 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dichlorophenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



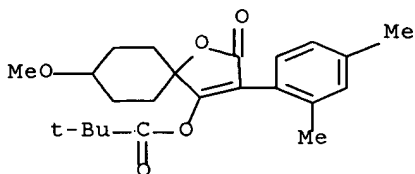
RN 164153-56-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-3-(2,4-dimethylphenyl)-8-methoxy- (9CI) (CA INDEX NAME)



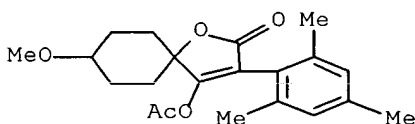
RN 164153-57-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 3-(2,4-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



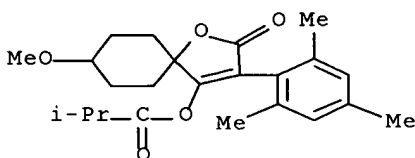
RN 164153-58-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(acetyloxy)-8-methoxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



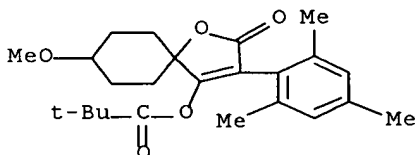
RN 164153-59-7 CAPLUS

CN Propanoic acid, 2-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



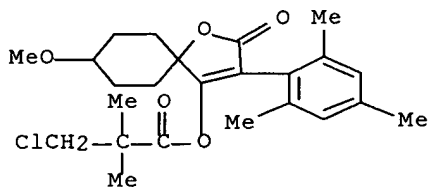
RN 164153-60-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



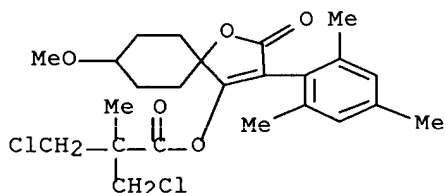
RN 164153-61-1 CAPLUS

CN Propanoic acid, 3-chloro-2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



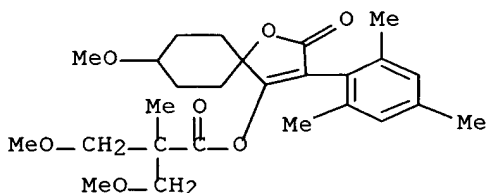
RN 164153-62-2 CAPLUS

CN Propanoic acid, 3-chloro-2-(chloromethyl)-2-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



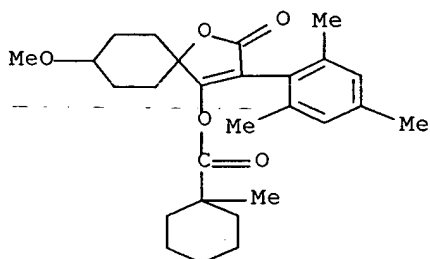
RN 164153-63-3 CAPLUS

CN Propanoic acid, 3-methoxy-2-(methoxymethyl)-2-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



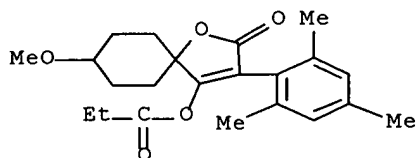
RN 164153-64-4 CAPLUS

CN Cyclohexanecarboxylic acid, 1-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



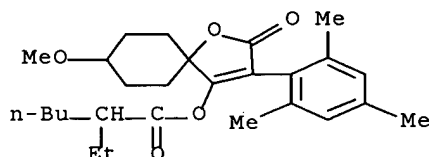
RN 164153-65-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 8-methoxy-4-(1-oxopropoxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



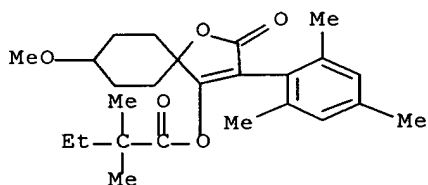
RN 164153-66-6 CAPLUS

CN Hexanoic acid, 2-ethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



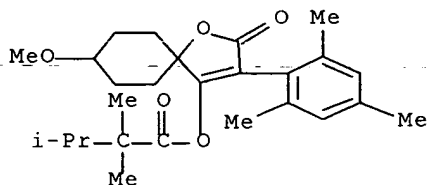
RN 164153-67-7 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



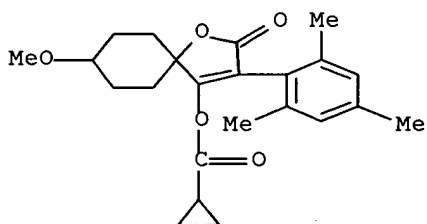
RN 164153-68-8 CAPLUS

CN Butanoic acid, 2,2,3-trimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

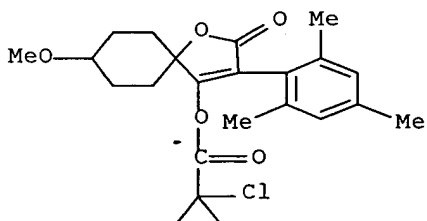




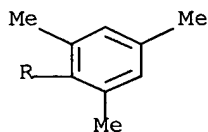
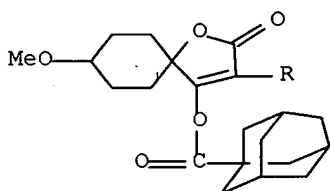
RN 164153-69-9 CAPLUS  
 CN Cyclopropanecarboxylic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-  
 1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



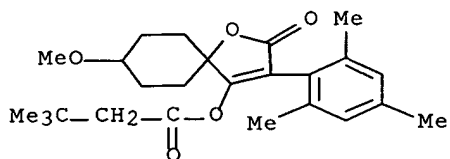
RN 164153-70-2 CAPLUS  
 CN Cyclopropanecarboxylic acid, 1-chloro-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



RN 164153-71-3 CAPLUS  
 CN Tricyclo[3.3.1.1.3,7]decane-1-carboxylic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

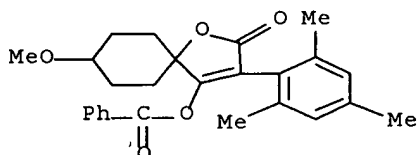


RN 164153-72-4 CAPLUS  
 CN Butanoic acid, 3,3-dimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-  
 1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



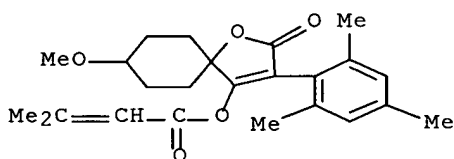
RN 164153-73-5 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(benzoyloxy)-8-methoxy-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



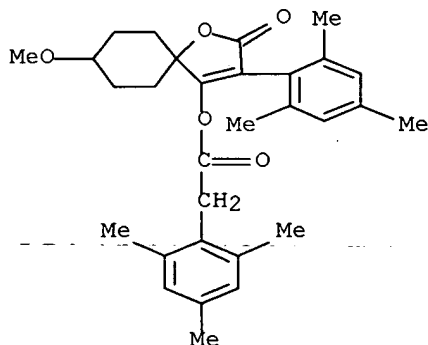
RN 164153-74-6 CAPLUS

CN 2-Butenoic acid, 3-methyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



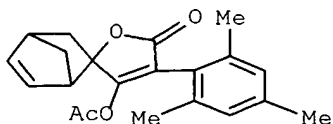
RN 164153-75-7 CAPLUS

CN Benzeneacetic acid, 2,4,6-trimethyl-, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)

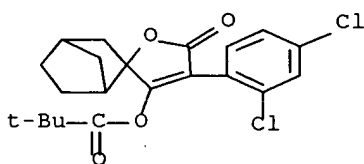


RN 164153-80-4 CAPLUS

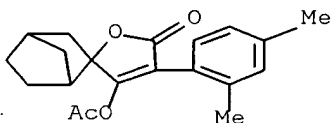
CN Spiro[bicyclo[2.2.1]hept-5-ene-2,2'(5'H)-furan]-5'-one,  
3'-(acetyloxy)-4'-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



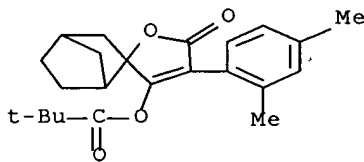
RN 164153-81-5 CAPLUS  
CN Propanoic acid, 2,2-dimethyl-, 4'-(2,4-dichlorophenyl)-5'-  
oxospiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-3'-yl ester (9CI) (CA  
INDEX NAME)



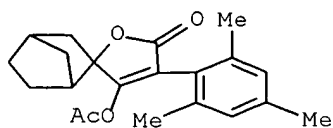
RN 164153-82-6 CAPLUS  
CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 3'-(acetyloxy)-4'-  
(2,4-dimethylphenyl)- (9CI) (CA INDEX NAME)



RN 164153-83-7 CAPLUS  
CN Propanoic acid, 2,2-dimethyl-, 4'-(2,4-dimethylphenyl)-5'-  
oxospiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-3'-yl ester (9CI) (CA  
INDEX NAME)

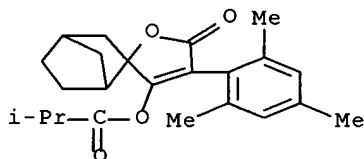


RN 164153-84-8 CAPLUS  
CN Spiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-5'-one, 3'-(acetyloxy)-4'-  
(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



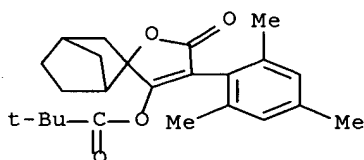
RN 164153-85-9 CAPLUS

CN Propanoic acid, 2-methyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



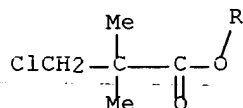
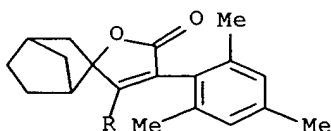
RN 164153-86-0 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



RN 164153-87-1 CAPLUS

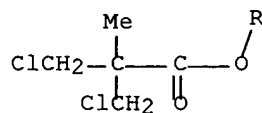
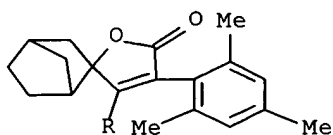
CN Propanoic acid, 3-chloro-2,2-dimethyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



RN 164153-88-2 CAPLUS

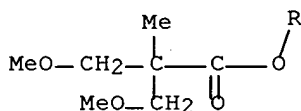
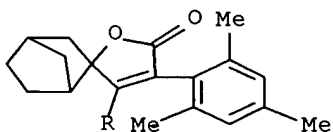
CN Propanoic acid, 3-chloro-2-(chloromethyl)-2-methyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester

(9CI) (CA INDEX NAME)



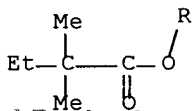
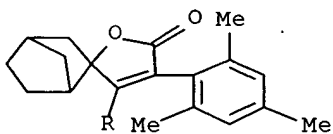
RN 164153-89-3 CAPLUS

CN Propanoic acid, 3-methoxy-2-(methoxymethyl)-2-methyl-,  
5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-  
furan]-3'-yl ester (9CI) (CA INDEX NAME)



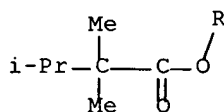
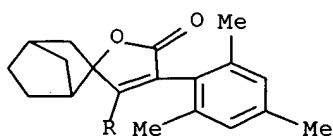
RN 164153-90-6 CAPLUS

CN Butanoic acid, 2,2-dimethyl-, 5'-oxo-4'-(2,4,6-  
trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester  
(9CI) (CA INDEX NAME)



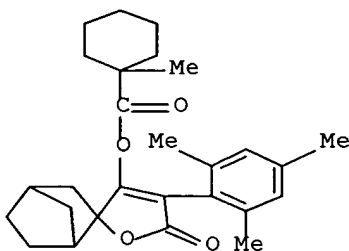
RN 164153-91-7 CAPLUS

CN Butanoic acid, 2,2,3-trimethyl-, 5'-oxo-4'-(2,4,6-  
trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester  
(9CI) (CA INDEX NAME)



RN 164153-92-8 CAPLUS

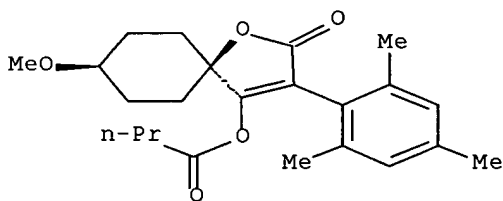
CN Cyclohexanecarboxylic acid, 1-methyl-, 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,2' (5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



RN 164153-93-9 CAPLUS

CN Butanoic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester, cis- (9CI) (CA INDEX NAME)

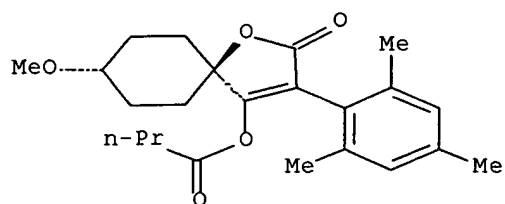
Relative stereochemistry.



RN 164153-94-0 CAPLUS

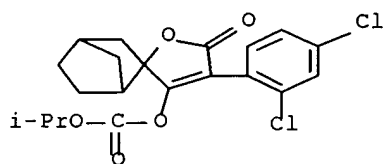
CN Butanoic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



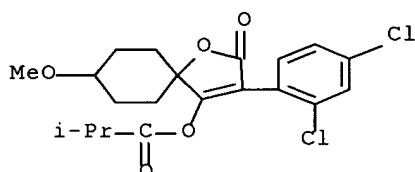
RN 164153-95-1 CAPLUS

CN Carbonic acid, 4'-(2,4-dichlorophenyl)-5'-oxospiro[bicyclo[2.2.1]heptane-2,2'(5'H)-furan]-3'-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



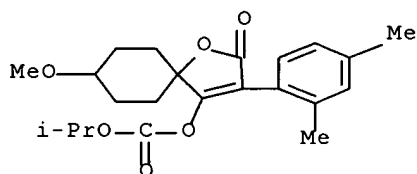
RN 164153-96-2 CAPLUS

CN Propanoic acid, 2-methyl-, 3-(2,4-dichlorophenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



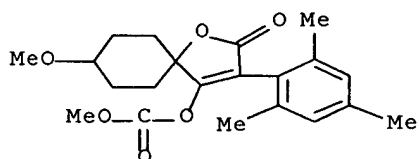
RN 164153-97-3 CAPLUS

CN Carbonic acid, 3-(2,4-dimethylphenyl)-8-methoxy-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



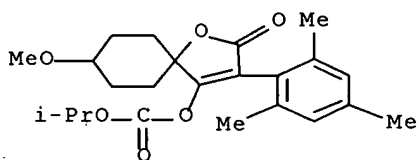
RN 164153-98-4 CAPLUS

CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl methyl ester (9CI) (CA INDEX NAME)



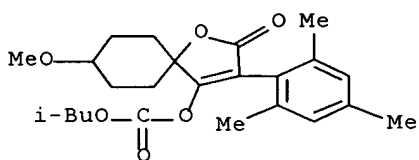
RN 164153-99-5 CAPLUS

CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



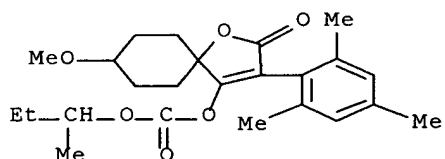
RN 164154-00-1 CAPLUS

CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 2-methylpropyl ester (9CI) (CA INDEX NAME)



RN 164154-01-2 CAPLUS

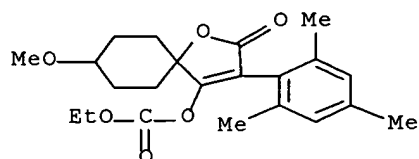
CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 1-methylpropyl ester (9CI) (CA INDEX NAME)



RN 164154-02-3 CAPLUS

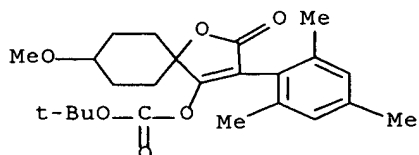
CN Carbonic acid, ethyl 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)





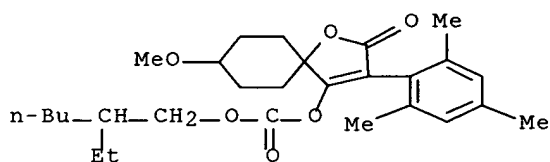
RN 164154-03-4 CAPLUS

CN Carbonic acid, 1,1-dimethylethyl 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



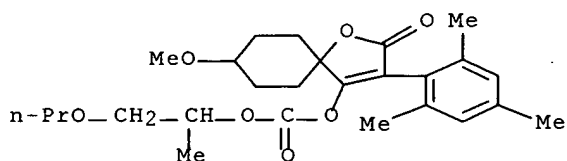
RN 164154-04-5 CAPLUS

CN Carbonic acid, 2-ethylhexyl 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl ester (9CI) (CA INDEX NAME)



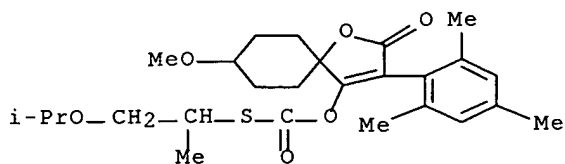
RN 164154-05-6 CAPLUS

CN Carbonic acid, 8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl 1-methyl-2-propoxyethyl ester (9CI) (CA INDEX NAME)



RN 164154-06-7 CAPLUS

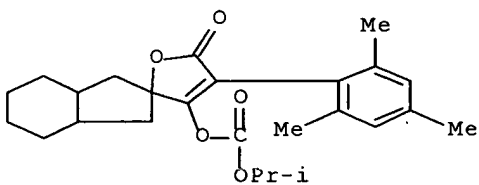
CN Carbonothioic acid, O-[8-methoxy-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl] S-[1-methyl-2-(1-methylethoxy)ethyl] ester (9CI) (CA INDEX NAME)



RN 164154-07-8 CAPLUS

CN Carbonic acid, 1-methylethyl 1',3',3'a,4',5',6',7',7'a-octahydro-5-oxo-4-

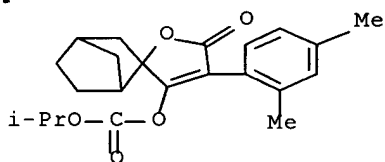
(2,4,6-trimethylphenyl)spiro[furan-2(5H),2'-[2H]inden]-3-yl ester (9CI)  
(CA INDEX NAME)



RN 164154-08-9 CAPLUS

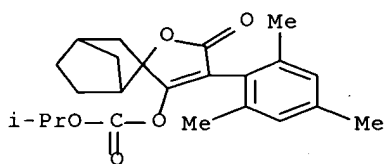
CN Carbonic acid, 4'-(2,4-dimethylphenyl)-5'-oxospiro[bicyclo[2.2.1]heptane-

2,2'(5'H)-furan]-3'-yl 1-methylethyl ester (9CI) (CA INDEX NAME)



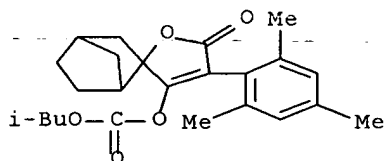
RN 164154-09-0 CAPLUS

CN Carbonic acid, 1-methylethyl 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,1'(5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



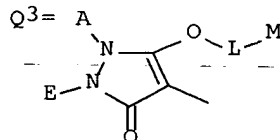
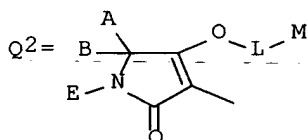
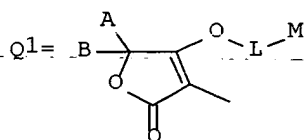
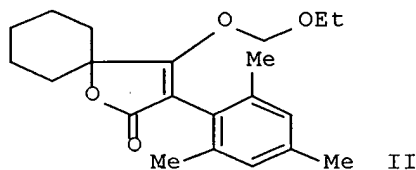
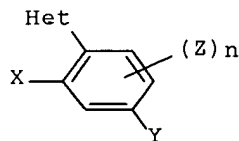
RN 164154-10-3 CAPLUS

CN Carbonic acid, 2-methylpropyl 5'-oxo-4'-(2,4,6-trimethylphenyl)spiro[bicyclo[2.2.1]heptane-2,1'(5'H)-furan]-3'-yl ester (9CI) (CA INDEX NAME)



L9 ANSWER 59 OF 186 CAPLUS COPYRIGHT 2003 ACS  
 AN 1995:444237 CAPLUS  
 DN 122:213917  
 TI Substituted aryl keto-enol heterocycles useful as pesticides  
 IN Bachmann, Juergen; Bretschneider, Thomas; Fischer, Reiner; Krueger, Bernd-Wieland; Santel, Hans-Joachim; Dollinger, Markus; Erdelen, Christoph; Wachendorff-Neumann, Ulrike  
 PA Bayer A.-G., Germany  
 SO Ger. Offen., 29 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4413669	A1	19950112	DE 1994-4413669	19940420
	WO 9501971	A1	19950119	WO 1994-EP2042	19940622
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	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
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	EP 707576	A1	19960424	EP 1994-919657	19940622
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	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT				
	BR 9407006	A	19960806	BR 1994-7006	19940622
	CN 1129444	A	19960821	CN 1994-193093	19940622
	HU 73746	A2	19960930	HU 1996-34	19940622
	JP 09500116	T2	19970107	JP 1994-503788	19940622
	AT 177093	E	19990315	AT 1994-919657	19940622
	ES 2130431	T3	19990701	ES 1994-919657	19940622
	US 5683965	A	19971104	US 1996-569194	19960513
PRAI	DE 1993-4322273		19930705		
	DE 1994-4413669		19940420		
	WO 1994-EP2042		19940622		
OS	CASREACT 122:213917; MARPAT 122:213917				
GI					



AB Title compds. I [X = alkyl, halo, alkoxy; Y = H, alkyl, halo, alkoxy, haloalkyl; Z = alkyl, halo, alkoxy; n = 0-3; Het = group Q1, Q2, or Q3; A,

B, E = H, (halo-substituted) alkyl, alkenyl, alkoxyalkyl, alkylthioalkyl, (hetero)cycloalkyl, (un)substituted (hetero)aryl, aralkyl; or AB or AE forms (un)satd., (un)interrupted, and/or (un)substituted ring(s); L = alkanediyl; M = variety of org. terminal structures and functional groups

including cyano, amide, esters, (thio)ethers, alkynyl, aryl, etc.] and their enantiomers are claimed, and over 30 specific examples are given. The compds. are useful as pesticides, particularly as acaricides, insecticides, fungicides, and herbicides. For example, O-alkylation of 3-(2,4,6-trimethylphenyl)-4-hydroxy-5,5-pentamethylene-.DELTA.3-dihydrofuran-2-one by ClCH<sub>2</sub>OEt in CH<sub>2</sub>Cl<sub>2</sub> in the presence of Et<sub>3</sub>N and a small amt. of DMAP at 0-10.degree. gave 53% title compd. II. At a rate

of 0.02% (spray), II gave 98% kill of OP-resistant Tetranychus urticae, and 100% kill of Panonychus ulmi, after 7 days. Addnl. insecticidal and preemergence herbicidal results are given.

IT 148476-10-2

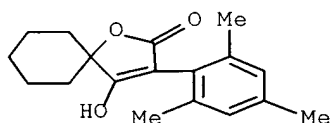
RL: RCT (Reactant); RACT (Reactant or reagent)

(O-alkylation of; prepn. of substituted aryl keto-enol heterocycles as pesticides)

RN 148476-10-2 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-hydroxy-3-(2,4,6-trimethylphenyl)-(9CI)

(CA INDEX NAME)



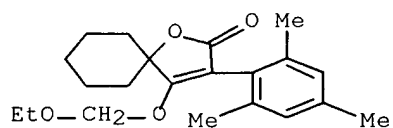
IT 161800-24-4P 161800-25-5P 161800-26-6P  
161800-27-7P 161800-28-8P 161800-29-9P  
161800-30-2P 161800-31-3P 161800-32-4P  
161800-33-5P 161800-34-6P 161800-35-7P  
161800-36-8P 161800-37-9P 161800-38-0P  
161800-39-1P 161800-40-4P 161800-41-5P  
161800-42-6P 161800-43-7P 161800-44-8P  
161800-45-9P 161800-46-0P 161800-47-1P  
161800-48-2P 161800-49-3P 161800-50-6P  
161800-51-7P 161800-52-8P 161800-53-9P  
161800-54-0P 161800-55-1P

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of substituted aryl keto-enol heterocycles as pesticides)

RN 161800-24-4 CAPLUS

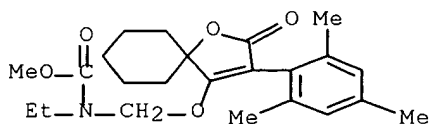
CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(ethoxymethoxy)-3-(2,4,6-trimethylphenyl)-

(9CI) (CA INDEX NAME)



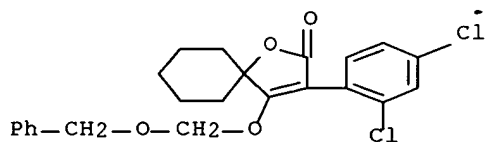
RN 161800-25-5 CAPLUS

CN Carbamic acid, ethyl[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)



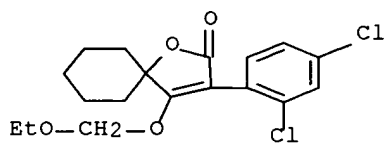
RN 161800-26-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-[(phenylmethoxy)methoxy]- (9CI) (CA INDEX NAME)



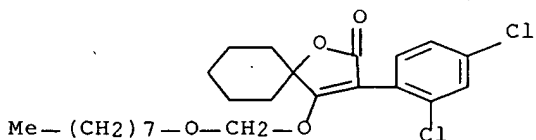
RN 161800-27-7 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-(ethoxymethoxy)- (9CI) (CA INDEX NAME)



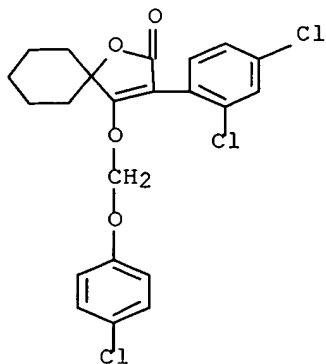
RN 161800-28-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-[(octyloxy)methoxy]- (9CI) (CA INDEX NAME)



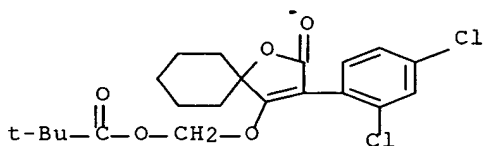
RN 161800-29-9 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(4-chlorophenoxy)methoxy]-3-(2,4-dichlorophenyl)- (9CI) (CA INDEX NAME)



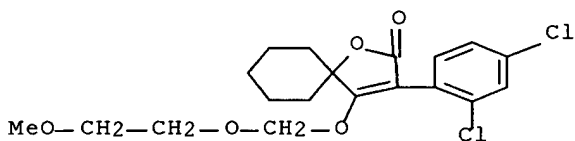
RN 161800-30-2 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, [[3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl ester (9CI) (CA INDEX NAME)



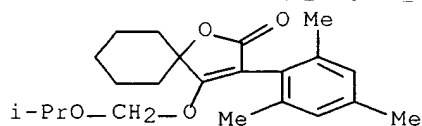
RN 161800-31-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-[(2-methoxyethoxy)methoxy]- (9CI) (CA INDEX NAME)



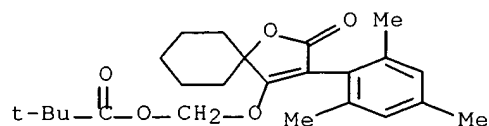
RN 161800-32-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(1-methylethoxy)methoxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



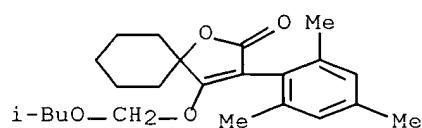
RN 161800-33-5 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, [[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl ester (9CI) (CA INDEX NAME)



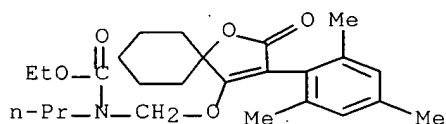
RN 161800-34-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(2-methylpropoxy)methoxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



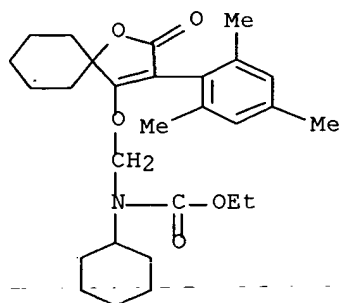
RN 161800-35-7 CAPLUS

CN Carbamic acid, [[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]propyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 161800-36-8 CAPLUS

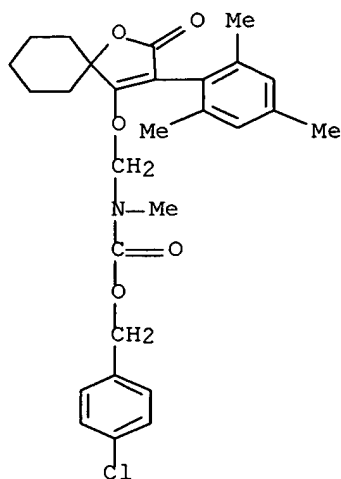
CN Carbamic acid, cyclohexyl[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 161800-37-9 CAPLUS

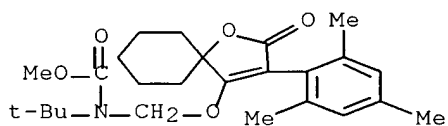
CN Carbamic acid, methyl[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-

3-en-4-yl]oxy)methyl]-, (4-chlorophenyl)methyl ester (9CI) (CA INDEX NAME)



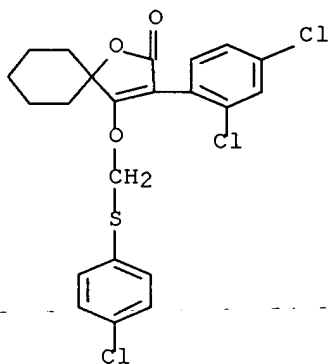
RN 161800-38-0 CAPLUS

CN Carbamic acid, (1,1-dimethylethyl)[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy)methyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 161800-39-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[[[(4-chlorophenyl)thio]methoxy]-3-(2,4-dichlorophenyl)]- (9CI) (CA INDEX NAME)

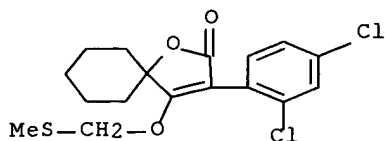


RN 161800-40-4 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-[[[(4-chlorophenyl)thio]methoxy]]-

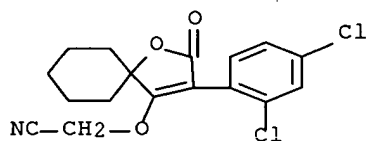


[(methylthio)methoxy]- (9CI) (CA INDEX NAME)



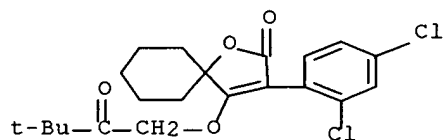
RN 161800-41-5 CAPLUS

CN Acetonitrile, [[3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]- (9CI) (CA INDEX NAME)



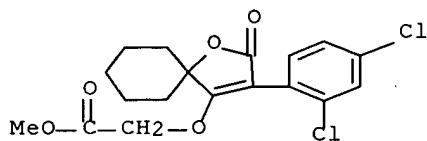
RN 161800-42-6 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 3-(2,4-dichlorophenyl)-4-(3,3-dimethyl-2-oxobutoxy)- (9CI) (CA INDEX NAME)



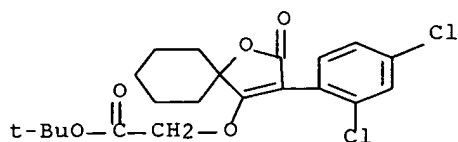
RN 161800-43-7 CAPLUS

CN Acetic acid, [[3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]-, methyl ester (9CI) (CA INDEX NAME)



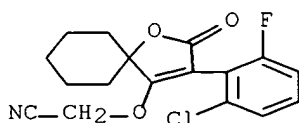
RN 161800-44-8 CAPLUS

CN Acetic acid, [[3-(2,4-dichlorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



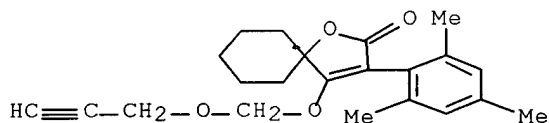
RN 161800-45-9 CAPLUS

CN Acetonitrile, [[3-(2-chloro-6-fluorophenyl)-2-oxo-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]- (9CI) (CA INDEX NAME)



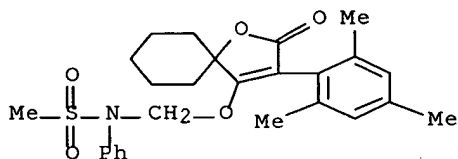
RN 161800-46-0 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(2-propynyloxy)methoxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME).



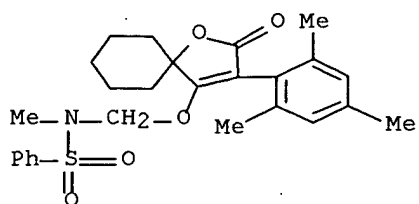
RN 161800-47-1 CAPLUS

CN Methanesulfonamide, N-[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-N-phenyl- (9CI) (CA INDEX NAME)



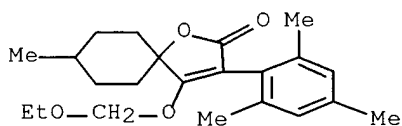
RN 161800-48-2 CAPLUS

CN Benzenesulfonamide, N-methyl-N-[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]- (9CI) (CA INDEX NAME)



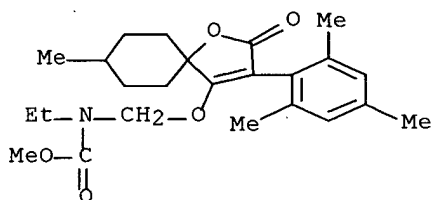
RN 161800-49-3 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(ethoxymethoxy)-8-methyl-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



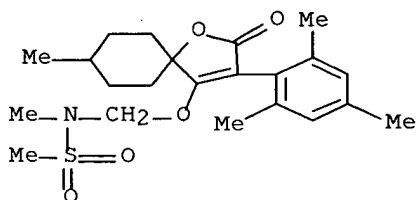
RN 161800-50-6 CAPLUS

CN Carbamic acid, ethyl[[[8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)



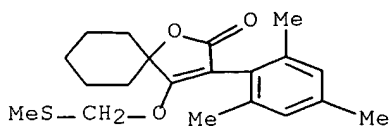
RN 161800-51-7 CAPLUS

CN Methanesulfonamide, N-methyl-N-[[[8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]- (9CI) (CA INDEX NAME)



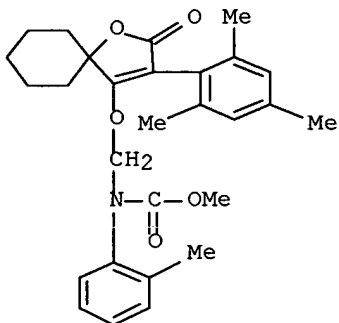
RN 161800-52-8 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-[(methylthio)methoxy]-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)



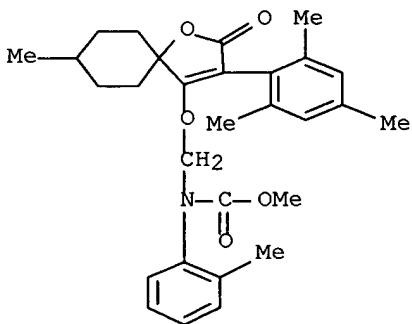
RN 161800-53-9 CAPLUS

CN Carbamic acid, (2-methylphenyl)[[[2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 161800-54-0 CAPLUS

CN Carbamic acid, [[[8-methyl-2-oxo-3-(2,4,6-trimethylphenyl)-1-oxaspiro[4.5]dec-3-en-4-yl]oxy]methyl](2-methylphenyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 161800-55-1 CAPLUS

CN 1-Oxaspiro[4.5]dec-3-en-2-one, 4-(2-propenyloxy)-3-(2,4,6-trimethylphenyl)- (9CI) (CA INDEX NAME)

